National ATS Procedures Manual

Manual

ATS-MAN-0014

Version 42

Effective 7 November 2019

Authorised: Operational Standards Manager

The following temporary amendments apply to this document:

TLI number	TLI name	Effective date	Affected clauses
19_0336	NAPM 9.1.2 PRD Procedure	1911260200	9.1.2, 9.1.2.1, 9.1.2.2, 9.1.2.3, 9.1.2.4, 9.1.2.5,
20_0056	NAPM Amendment – Lateral Conflict Tool (LATC)	2003110600	14.2.7.7, 14.2.7.8
20_0057	NAPM PDC Eligibility amendment	2003120130	9.2.3.2
20_0082	Cordless Headsets	2003260130	14.12.2.1
20_0083	Foot PTT function key	2003260035	14.13.1.7
20_0113	Direct Tracking	2004170410	9.2.2.1

Change summary

National ATS Procedures Manual Version 42: 7 November 2019		
Location of change	**Change description**	**NRFC**
1.3.2.1 1.5.5	Facilitates a MATS amendment to permit ATC to issue an instruction to an aircraft on a radar SID to track extended centre line (TLI 19_0230 - Track Extended Centre Line).	40840
2.3.1 2.3.2 2.3.3 2.3.4 2.3.5	Removes sections from NAPM that now reside in the Network Operations Procedure Manual (NOPM) (NRFC 40123, TLI 19_0284 - NAPM Update for Creation of Network Operations Procedure Manual (NOPM))	
2.7.4.1	Removes the advice to dial 1194 for time checks and removes Brisbane and Cairns as non-INTAS towers from the same clause (NRFC 40708, TLI 19_0285 - Tower Time Checks)	
4.1.3.1	Standardises the procedure for responding to requests for medical assistance (TLI 19_0110 - Request for Medical Assistance).	
10.6.1.1	Procedures for applying altimetry for the purposes of RPAS altimetry (TLI 19_0200 - NAPM RPAS Altimetry).	
11.3.3.1 11.3.4.1.1 11.3.5.1 11.3.7.1.2 11.3.7.2 11.3.7.2.1	Standardisation of MAESTRO procedures (NRFC 40179)	
11.3.7.5 11.4.4.4	Clarifies speed control to requirements for arriving aircraft (TLI 19_0130 - Feeder fix Speed Control) • NRFC 40754 • NRFC 40179	
14.2.13.4 14.2.14.3.1	Brisbane ORM Documentation (NRFC 40625)	
14.7.1.6 14.7.1.6.1 14.7.1.6.3	Ensures HBAL FDRs are refreshed each day to prevent subsequent errors related to old FDRs (TLI 19_0209 - HBAL FDR Refresh).	

This document was created using Air Traffic Services (ATS) Operational Document Template (C-TEMP0256) Version 2.

View Change Summaries for the previous six months

List of effective pages

Part		Pages	Version: Effective date
DC	Document control	4	Version 42: 7 November 2019
TOC	Table of contents	4	Version 42: 7 November 2019
1	Definitions	46	Version 42: 7 November 2019
2	Operational context	14	Version 42: 7 November 2019
3	Meteorology	2	Version 35: 18 August 2016
4	Abnormal operations	4	Version 42: 7 November 2019
5	Special operations	6	Version 41: 23 May 2019
6	Coordination and communication	18	Version 41: 23 May 2019
7	ATS message processing	8	Version 38: 9 November 2017
8	Information services	4	Version 41: 23 May 2019
9	Control practices	32	Version 41: 23 May 2019
10	Separation	10	Version 42: 7 November 2019
11	Approach control	10	Version 42: 7 November 2019
12	Aerodrome control	22	Version 41: 23 May 2019
14	Systems	72	Version 42: 7 November 2019
Index	Index	24	Version 42: 7 November 2019

View National LoAs

This page is intentionally blank

Table of Contents

This page is intentionally blank

1 Definitions and information recording

1.1 Definitions - terms

Terms	Definitions
DEFAULT Workstation	A VCS workstation specified in Local Instructions that is generally always attended (e.g. the workstation used during night shifts) where unmonitored frequencies revert to.
Failure	A fault resulting in the total loss of the facility to a level unacceptable to the user.
Fault	An equipment malfunction, which does not cause a total loss of the facility.
Feeder Fix	Designated waypoints used when sequencing arriving aircraft. ***Note:*** *Feeder Fix times are also known as waypoint crossing times.*
HANDOVER Mission	A VCS mission defined per unit that consists of Cold Line Keys to all positions within the unit. This mission is activated when a console is unattended.
Harmony for ANSPs (HFA)	The Airservices ATFM system.
INTAS tower	A tower using INTAS technology for service provision.
Line Manager	The generic title for a manager responsible for a discrete operational function/portfolio within a Centre, a unit (including Terminal Control Unit), or a tower. It also includes a manager responsible for a specific function such as Flight Information Service. Line Managers report to the relevant Operations Manager. An ATC Line Manager (ALM) may also undertake the role of Shift Manager/Supervisor on a daily basis.
Metro D tower	Class D CTR control towers that have a unique combination of parallel runways and may lack associated CTA steps. The Metro D towers are: a) Archerfield; b) Bankstown; c) Camden; d) Jandakot; e) Moorabbin; and f) Parafield.
Operational Command Authority	The overall responsibility for the provision of an operational service.
Prime Position	An operational position or discrete function designated as being the position or function from which OCA is exercised within a functional group, when the Shift Manager/Supervisor is absent or unavailable.
Regional tower	Class D CTR control towers excluding the Metro D towers.
Shift Manager/ Supervisor	The positions responsible for the overall provision of an Air Traffic Service. This task requires general supervision of operational staff to ensure a safe and efficient air traffic service and exercising Operational Command Authority.
Strip	Flight Progress Strip

Terms	Definitions
Supervisor	A term incorporating any or all of SM/SS/ORM/SYTM/SMHF.
System Supervisor	The System Supervisor's primary role is the overseeing and management of all operational facilities that support air traffic service delivery. A System Supervisor must be on duty H24.
Unit	A number of operational positions or discrete functions which have a geographical or functional affinity.

1.2 Glossary - contractions

Abbreviation	Meaning
ABI	Advanced Boundary Information (message type designator)
ABL	ADS-B level displayed in track label
ABN	Aerodrome Beacon
ACARS	Aircraft Communication Addressing and Reporting System
ACO	Area Configuration Officer
ADS	ATM Data Services
ADSM	ATM Data Services Manager
AERIS	Automatic En Route Information Service
AFIL	Flight notification filed in the air; or indicating the position at which ATS services will first be required
AFIS	Aerodrome Flight Information Service
AL	Amended Level
ALM	ATC Line Manager
ASD	Air Situation Display
ASPB	Air Situation Play Back
ASSR	Assigned SSR Code
ATN	Aeronautical Telecommunication Network
ATO	Actual Time of Overflight
ATSI	ATS Integrity
ATSU	Air Traffic Services Unit
ATSWpA	ATS Workplace Assessor
BCP	Business Continuity Plan
BRL	Bearing and Range Line
BTN	Between
C&SS	Check and Standardisation Supervisor
CATC	Chief Air Traffic Controller
CDM	Collaborative Decision Making
CLAM	Cleared Level Adherence Monitoring
CLSD	Closed

Abbreviation	Meaning
CO	Coach VCS headset jack
COND	Condition
COOR	Coordinate or Coordinated
CP	Contingency Plan
CRM	Contingency Response Manager
CTC	Contact
CTS	Check Training and Standards
DAIW	Dangerous Area Infringement Warning
DCKG	Docking
DEV	Deviation or Deviating
DIST	Distance
DLM	Duty Network Operations Line Manager
DUPE	Duplicate Message
EC	Executive Controller
EOC	Expected Onward Clearance (time)
ETD	Estimated Time of Departure
ETI	Estimated Time Interval
ETN	Estimated Time of Entry
ETO	Estimated Time Over Significant Point
ETS	External Tower System (INTAS)
EXP	Expect, Expected, Expecting
FCST	Forecast
FDP	Flight Data Processor
FDC	Flight Data Coordinator
FDE	Flight Data Element
FDR	Flight Data Record
FDRG	Flight Data Region
FEC	Fully Endorsed Controller
FMS	Flight Management System
FPCF	Flight Plan Conflict Function
FPCW	Flight Plan Conflict Warning
FPSNA	Flight Plan Safety Net Alert
FRC	Full Route Clearance
FRUL	Flight Rules
GIW	General Information Window
GRIB	Processed meteorological data in the form of grid point values expressed in binary form (aeronautical meteorological code)
GTS	Group Training Specialist

Abbreviation	Meaning
HEL	Helicopter
HIJ	Hijack
HMI	Human Machine Interface
IFER	In Flight Emergency Response
IFP	Instrument Flight Procedures
INTAS	Integrated Tower Automation Suite
LAN	Local Area Network
LI	Local Instructions
LNK	RPAS Lost Link. The loss of command and control link between the Remote Pilot (RP) and Remotely Piloted Aircraft (RPA)
LoA	Letter(s) of Agreement
LPL	Local Flight Plan
LRM	Logical Rejection Message
MAINT	Maintenance
MCL	Mode C level displayed in track label
MET CDM	Meteorological Collaborative Decision Making
MIS	Management Information System
MIS	Missing
MPR	Missed Position Report
MSAW	Minimum Safe Altitude Warning
MSG	Message
NAS	National Airways System
NAT	Naval Training
NCC	Network Coordination Centre
NCCMET	NCC MET Officer
NCSS	National Check and Standardisation Supervisor
NRFC	National Request for Change
OAR	Office of Airspace Regulation (CASA)
OCA	Operational Command Authority
OJT	On the Job Training
OM	Operations Manager
OP	Operators VCS headset jack
OSA	Operations Standards & Assurance
OSM	Operational Standards Manager
PAC	Pre-activation (message type designator)
PAR	Performance Assessment Report
PETO	Pilot Estimated Time Over Significant Point
PRL	Pilot Reported Level

Abbreviation	Meaning
PSSR	Previous SSR Code
PTT	Push-to-talk
RAD	Radius
RAM	Route Adherence Monitor
REG	Registration
RPL	Repetitive Flight Plan
RPT	Repeat or I repeat
RQ	Require(d)
RTE	Route
RX	Receiver
SDT	Stack Departure Time
SEV	Severe
SIGWX	Significant Weather
SM	Shift Manager
SRT	Service Restoration Time
SS	System Supervisor
STCA	Short Term Conflict Alert
STD	Standard
STS	Status
SVM	Service Manager
T	Temperature
TAIL	Tail Wind
TBA	To Be Advised
TCO	Terminal Control Unit Configuration Officer
TMCS	Technical Monitoring and Control System
TNA	Training Needs Analysis
TOC	Technical Operations Centre
TS	Thunderstorm (in aerodrome reports and forecasts, TS used alone means thunder heard but no precipitation at the aerodrome)
TURB	Turbulence
TX	Transmitter
TXT	Text
TYP	Type of Aircraft
UC	Unanswered Call
UTS	Unit Tower Supervisor
VCS	Voice Communication System
VIRR	Voice Instant Record and Replay

Abbreviation	Meaning
VOLMET	Meteorological information for aircraft in flight
VRB	Variable
VSP	Variable System Parameter
VTC	Visual Terminal Chart
WI	Within
WILCO	Will Comply
WIP	Work In Progress
YR	Your, Yours

1.3 Flight Data Records - Eurocat

1.3.1 Information entry requirements

1.3.1.1 Record information

Record flight information and instructions directly into the FDR. Use a scratch pad or text on screen to record information that cannot be recorded directly into the FDR.

1.3.1.2 Standardised information recording

Conform to a standardised method of information recording. Methods used may vary between sector groups depending on local and sector specific requirements.

1.3.1.3 Scratch pad

1.3.1.3.1 Scratch pad example

Previous page complete		
Action @	**ACID**	**Action**
Notes		

1.3.1.3.2 Scratch pad instructions

Position	Information
Action @ [time]	Action is required or was completed at the time specified. Record the times sequentially in the column.
ACID	Callsign of the aircraft requiring the action to be performed. Split the box if more than one aircraft is affected.
Action	Annotate the required action or information. Cross out the entry once completed.

1.3.2 Annotations - Eurocat

1.3.2.1 Approved Eurocat annotations

Use the following annotations when recording information or entering data into the FDR.

Refer to 11.3 Maestro for Maestro abbreviations.

You may use annotations from other sections of Part 1 if required.

Note: *The use of / in the LABEL_DATA, GLOBAL_OPS_INFO or LOCAL_OPS_INFO fields will generate multiple Eurocat syntax error messages. \ is to be used as per the following Eurocat tables:*

Time		
Information/instruction	**Meaning and usage**	**Annotation/example**
Four-figure time group	Expected or actual times of occurrences. Use four-figures unless stated otherwise.	1051
Two-figure time group	Expected or actual times of occurrences. Use when an associated four-figure time is already annotated or the hour to which the two-figure time refers is obvious and there is no possibility of confusion.	51
At or after (via CPDLC) At or later (via voice)		AA0145
At or before		AB0145

Flight rules		
Information/instruction	**Meaning and usage**	**Annotation/example**
Instrument Flight Rules (IFR)		I
Visual Flight Rules (VFR)		V
IFR then VFR		Y
VFR then IFR		Z

Types of operation		
Information/instruction	**Meaning and usage**	**Annotation/example**
Scheduled air service		S
Non-scheduled air transport operation		N
General aviation		G
Military		M
Covert Operations (in LABEL_DATA field)		CVT
If other than any of the defined categories		X
Formation flights (in LABEL_DATA field)	Close	CLS
	Standard	STD
	In-trail	TRL

Performance category and special priority		
Information/instruction	**Meaning and usage**	**Annotation/example**
HEAD	Head of State	HEAD
MILSPECREQ	Military Special Requirements	SPECREQ SR
MEDEVAC	Medical Emergency Evacuation	MED
PAN (Medical Emergency)	PAN (Medical Emergency)	PANM
HOSP	Hospital	HOSP
FFR	Flood or Fire Relief	FFR
SAR	Search And Rescue	SAR

Level		
Information/instruction	**Meaning and usage**	**Annotation/example**
Aircraft level	a) Two or three figure group; b) Record flight levels or altitudes of 1000 FT or greater as multiples of 100 FT; and c) Record altitudes of less than 1000 FT as a two-digit number beginning with zero (0), followed by the multiple of 100 FT	FL177 A01
Above Ground Level	Record on the right-hand side of the height above the ground or water level	200AGL
Maintain assigned level		370 M►
Maintain initial level	Departure instruction M(level)	M80
Maintain/climb to and maintain visual level		M70 V►
Assigned visual level	(level)V	70V
Assigned level not below the DME steps	(level)D	30D
Assigned level not below the GNSS steps	(level)G	30G
Amended level		AL350
Climb to (level)		↑370
Descend to (level)		↓180
Step climb	Record aircraft with which the climb is associated on the right-hand side	↥ABC
Step descent	Record aircraft with which the descent is associated on the right-hand side	↧ABC
VFR climb	Record assigned level on the left-hand side	45V↑
VFR descent	Record assigned level on the left-hand side	15V↓
VFR departure	Record assigned level on the left-hand side	15VD
Special VFR	Record assigned level on the left-hand side	15SV
VFR-on-top	Record level restriction on the left-hand side	A080 VT
VFR-on-top	Enter into track label when aircraft is issued clearance to climb to or maintain VFR on top	VT
Level as cleared by ATC		370→

Level		
Information/instruction	**Meaning and usage**	**Annotation/example**
Not Above (level)	NA(level)	NA150
Not Below (level)	NB(level)	NB150
Block Level Clearance	B(level)(level)	B350370

Speed		
Information/instruction	**Meaning and usage**	**Annotation/example**
Maintain indicated airspeed or **less**	(IAS)L	250L
Maintain indicated airspeed or **greater**	(IAS)G	250G
Indicated airspeed (climbing, cruising or descending)	(speed)K The use of 'K' is optional but may be used if there is a possibility of confusion.	120K
Pilot advised Mach number	.(speed)	.84
Mach number assigned to aircraft	M(speed)	M78
Maintain Mach number or **less**	M(speed)L	M83L
Maintain Mach number or **greater**	M(speed)G	M83G

Route/position		
Information/instruction	**Meaning and usage**	**Annotation/example**
Location indicator	Standard three or four letter location indicator available in ERSA. Reduce indicator to the last two or three letters where no confusion is likely.	YBBN YMML BN BNA
Waypoint name	Reduce five letter positions to three letters if no confusion will exist.	GULUM GUL
Full location name	Where no standard indicator is available and LIs do not specify.	Bruce Rock
Location indicator and bearing and distance	Position expressed as bearing and distance from a datum. Omit the location indicator when: a) a common datum is used for all such recorded positions; b) no confusion is likely; c) the distance is expressed as a minimum of two figures; and d) bearing and distance figures are separated by a backslash.	BN150032 or 150\32
Amended route	When assigned route differs to that planned.	AR
Re-cleared		RC
Flight planned route		FPR
No rejoin expectation	When vectoring or clearing an aircraft away from a STAR and a rejoin expectation has not been issued.	NJ
Abeam	When aircraft will not over-fly a specific place.	A\(position)
Base	When joining base. For use with traffic running sheets only.	B
Circuit area	For use with traffic running sheets only.	C
Crosswind	When departing or joining crosswind. For use with traffic running sheets only.	X
Downwind	When departing or joining downwind. For use with traffic running sheets only.	D
Final	When joining final. For use with traffic running sheets only.	F
Overfly	When joining by the overfly procedure. For use with traffic running sheets only.	O
Training area	For use with traffic running sheets only.	T

Route/position		
Information/instruction	**Meaning and usage**	**Annotation/example**
Upwind	When departing or joining upwind. For use with traffic running sheets only.	U
Dead reckoning		DR
Deviation from route	When annotating a deviation from route that cannot be displayed using the OTD field.	L (for left) R (for right) LR (for left and right)

Heading		
Information/instruction	**Meaning and usage**	**Annotation/example**
Right turn (heading)		R180
Left turn (heading)		L090
H [heading]	Assigned heading. Omit the digits when: a) the heading is unknown or immaterial; and b) no confusion is likely.	H270 or H
Maintain Runway heading	Surveillance environment	MR
Track Extended Centre Line	Surveillance environment. When the aircraft is required to track on the extended centre line of the runway.	TEC
Climb Straight Ahead	Non-surveillance environment	CSA

Requests, requirements and restrictions		
Information/instruction	**Meaning and usage**	**Annotation/example**
Request	Aircraft request	R30L, R370
No restrictions	Changes to both lateral or vertical clearances permitted without further coordination.	NR
No vertical restrictions	Changes to vertical clearance permitted without further coordination. ***Note:*** *Change to lateral must be pre-coordinated.*	NVR
No lateral restrictions	Changes to lateral clearance permitted without further coordination. ***Note:*** *Change to vertical must be pre-coordinated.*	NLR
No restrictions on descent	Changes to vertical clearance on descent permitted without further coordination. ***Note:*** *Lateral or climb changes must be pre-coordinated.*	NRD
No restrictions on climb	Changes to vertical clearance on climb permitted without further coordination. ***Note:*** *Lateral or descent changes must be pre-coordinated.*	NRC
No frequency requirements		NFR
No frequency requirements or restrictions		NRR
R(level)X(posn)	Requirement to reach a level by a position.	R370XGULUM
R(level)X(dist)(posn)	Requirement to reach a level by a distance before a position.	R370X50MCO
R(level)X(posn)(dist)	Requirement to reach a level by a distance after a position.	R370XMCO50
R(level)X(time)	Requirement to reach a level by a time (two or four figure time group).	R370X45 or R370X0145
Reach by	Where the requirement is to reach the cleared flight level by distance or time and no confusion will exist.	X20BN X1015
Note: *Five letter positions can be reduced to three letters as long as no confusion will exist.*		

Distance separation data		
Information/instruction	**Meaning and usage**	**Annotation/example**
Longitudinal distance standard	The distance between two aircraft subject to a longitudinal distance standard where: D = DME G = GNSS S = radar (surveillance) when aircraft are leaving coverage.	(distance)[D/G][S]@(time) 24S@02
Distance report	Distance report obtained from the aircraft including the reference abbreviation.	6CHBK

Operational information		
Information/instruction	**Meaning and usage**	**Annotation/example**
IFR Pick-Up		PU
Surveillance Information Service		SIS
At		@
Hold (position)		HCG
Operations normal		OPS
Unanswered Call (time)		UC (time)
Broadcast		B\
QNH		Q1013
Information is checked and correct, excluding the LABEL_DATA field	a) An aircraft has acknowledged receipt of control instructions, assigned level, or other information; b) An aircraft's reported operations agree with expected or assigned operations already recorded; c) A particular action has been taken or a particular requirement has been met; d) A frequency or control transfer is carried out within the specified time; or e) When an instruction or requirement in the GLOBAL_OPS_INFO field has been passed on behalf of another unit.	✓ < (in FDR)
Information/instruction is yet to be issued (LABEL_DATA field only)	Where there is a requirement to indicate information has not yet been passed. Remove the dot once action is completed.	S250. MX.

Operational information		
Information/instruction	**Meaning and usage**	**Annotation/example**
Clearance issued to an aircraft prior to 10 NM from the lateral CTA/boundary		>
Separate groups of information	Use a '\' symbol to avoid confusion when entering related groups of figures, and/or letters in close proximity.	150\10
Or\until		\
Alternative instructions		( )
Enters Lateral Conflict		ELC(time/posn)
Leaves Lateral Conflict		LLC(time/posn)
Clearance limit (FIX)	F\location or position	F\CSV
Sighting and Passing		S + P(callsign)
Sighting and Follow		S + F(callsign)
Calculated Time of Passing		TP
SARTIME		S
Unrestricted		U
No IFR Traffic		NIT
Cancel SARWATCH	IFR aircraft cancelled SARWATCH prior to the circuit area or destination ETA.	CSW
Hazard Alert	HA (location) (time)	HA CNK 0315
AIRMET	AM (sequence number) (time) [GAF area, if required]	AM01 2130 NSWW
SIGMET	(sequence number) (time)	C01 2310
System Estimate	When pilot estimate is entered in the FDR and the ETO alert cannot be resolved.	SE47
Pilot Estimate	When pilot estimate is significantly different to the entered system estimate.	PE50

Coordination		
Information/instruction	**Meaning and usage**	**Annotation/example**
Coordinated item		C30L, C370
Group designator	Sector designator with whom coordination is completed.	PIY

Emergency phases		
Information/instruction	**Meaning and usage**	**Annotation/example**
Alert phase (time)		A (time)
Distress phase (time)		D (time)
Uncertainty phase (time)		U (time)

Approach/arrivals/departures		
Information/instruction	**Meaning and usage**	**Annotation/example**
Expected Approach Time		EAT
Expect Onwards Clearance		EOC
Stack Departure Time		SDT
Latest Divert Time		LDT
Visual Approach		VSA
DME arrival		DME
TACAN approach	Followed by number if applicable.	TAC
NDB approach		NDB
Missed Approach		MA
GPS arrival		GPS
GNSS arrival		GNSS
RNAV (GNSS) approach	Include approach designator when more than one RNAV approach exists for RWY in use.	RNAV(RWY)
VOR approach		VOR
ILS approach		ILS
Visual Departure	LTS may allow abbreviations to V (civil only).	VSD
Note: *Applicable designators may precede the abbreviation.*		

Departure instructions - surveillance			
Information/instruction	**SID assigned**	**No SID assigned**	**Annotation /example**
LEFT [RIGHT] UNRESTRICTED	Not applicable	No restrictions	L [R]
TRACK EXTENDED CENTRE LINE (three digits) DEGREES, UNRESTRICTED	Radar SID, or Cancel procedural SID Maintain runway track Climb unrestricted	Not applicable	TEC
TURN LEFT [RIGHT] HEADING (three digits) UNRESTRICTED	Cancel SID Turn onto assigned heading Climb unrestricted	Turn onto assigned heading Climb unrestricted	L [R] 040
	or Where the SID requires an initial heading: a) turn onto assigned heading; b) fly assigned SID; and c) climb unrestricted		
UNRESTRICTED	**or** As a reminder of a published initial heading: a) fly assigned SID, including published heading; and b) climb unrestricted.		L [R] or U
TURN RIGHT [LEFT] HEADING (three digits), TO INTERCEPT OUTBOUND TRACK, UNRESTRICTED	Cancel SID Fly assigned heading to make pilot intercept of outbound track Climb unrestricted	Fly assigned heading to make pilot intercept of outbound track Climb unrestricted	R [L] 070 P
HEADING (three digits) (When the heading approximates runway bearing and no turn is required.)	Cancel SID Fly assigned heading Climb unrestricted	Fly assigned heading Climb unrestricted	H140
UNRESTRICTED	Unrestricted Fly assigned SID	Not applicable	U
CLIMB TO (level)	Fly assigned SID Maintain assigned level	Maintain assigned level	M60

Record sequence instructions		
Information/instruction	**Meaning and usage**	**Annotation/example**
Descent speed	Above STAR speed restricted level (A100)	280
Cruise speed	On cruise, profile on descent	180\P
Cruise speed/descent speed	(speed) on cruise, (speed) on descent	180\200
Mach reduction on cruise (two figures)		MR05
Mach reduction on cruise, descent speed	Reduce by M(no.) on cruise, descend at (speed) above STAR speed restricted level	MR05\280
Operate/climb/cruise/ descend at minimum speed		MIN
Operate/climb/cruise/ descend at maximum speed		MX
Stream to follow (ACID)		F\CZG
Stream to follow ACID by distance		F\CZG+20
Pilot to adjust time to arrive over Feeder Fix (in LIs)	May be preceded by position abbreviation.	42 B42
Flow initiated time	Pilot adjusted time (either by Directed Flow or ignore Maestro time) to cross Feeder Fix (as defined in LIs).	F42
Required time/pilot advised time	Pilot instructed to arrive at position at time 42 but advises latest time is 40.	F42\40
Estimated landing time (two figures)		L57
LAHSO approved		LA
LAHSO operations advised		LO
Passive LAHSO only		PL
Negative LAHSO		XX
Hold @ normal holding fix		H\
Hold @ position		H\CULIN
Hold @ normal holding fix, stack departure time (two figures)		H\32
Hold @ position, stack departure time (two figures)		H\C\46
No height requirement on STAR		NHR

Record sequence instructions		
Information/instruction	**Meaning and usage**	**Annotation/example**
No STAR (or cancel STAR)		NS
Cancel speed restrictions on STAR	Profile speed on descent, cancels STAR speed restriction.	CSR
Pilot requested high speed descent, cancel speed restrictions on STAR	Delineates between flow initiated high speed for sequencing, and a pilot request for high speed when sequencing is not a consideration.	MPR
CSEC initiated speed		S260
Set course from position (or distance) @ time		SC\DCU 37

Eurocat to INTAS sequencing		
Information/instruction	**Meaning and usage**	**Annotation/example**
Estimate for DEST navaid (two figures)		L57
Inbound track/bearing/ waypoint (three figures)	Bearing/radial inbound to waypoint	092TRI
Sequence number (one figure)	Position of aircraft in coordinated sequence	2
List sequencing instructions	List in the following order: 1) Time; 2) Track in; 3) Level (if not standard assignable) and requirement if required; and 4) Sequence number.	L42 092 060X17 1

Frequency information		
Information/instruction	**Meaning and usage**	**Annotation/example**
Aircraft communicating via VHF	Up to three alphanumeric characters as defined in LI/LoA.	DAL .35
Aircraft communicating via CPDLC		J
Aircraft communicating via HF		HF
	When you know which HF unit is communicating with the aircraft, replace 'F' with the first letter of the unit name.	HK (Kakadu HF)

1.4 Flight Data Elements - INTAS towers

1.4.1 Preparation

1.4.1.1 Record information

Record all flight information and instructions directly into the FDE or on a scratch pad.

1.4.1.2 POB recording

Record POB advice into the FDE or on the scratch pad when required.

1.4.1.3 Take-off and landing recording times

Record time for take-off using 'wheels off' (last contact - helicopters) and for landing, the time the landing clearance was issued. Record exact landing time when required (e.g. wake turbulence) in TWR RMKS or scratch pad.

1.4.2 Annotations - INTAS

1.4.2.1 Approved INTAS annotations

Use the following annotations when recording information.

You may use annotations from other sections of Part 1 if required.

Requests, requirements and restrictions		
Information/instruction	**Meaning and usage**	**Annotation/example**
R(level)X(posn)	Requirement to reach a level by a position.	R150XGULUM
R(level)X(dist)(posn)	Requirement to reach a level by a distance before a position.	R180X50MCO
R(level)X(posn)(dist)	Requirement to reach a level by a distance after a position.	R200XMCO50
R(level)X(time)	Requirement to reach a level by a time (two or four figure time group).	R150X45 or R150X0145
Reach by	Where the requirement is to reach the cleared flight level by distance or time and no confusion will exist.	X20BN X1015
Note: *Five letter positions can be reduced to three letters as long as no confusion will exist.*		

Record sequence instructions		
Information/instruction	**Meaning and usage**	**Annotation/example**
Estimate for DEST navaid (two figures)		L57
Inbound track/bearing/ waypoint (three figures)	Bearing/radial inbound to waypoint	092TRI
Sequence number (one figure)	Position of aircraft in coordinated sequence	2
List sequencing instructions	List in the following order: 1) Time; 2) Track in; 3) Level (if not standard assignable) and requirement if required; and 4) Sequence number.	L42 092 060X17 1

Note: *The use of / in the INTAS GOF will generate multiple Eurocat syntax error messages.*

1.5 Flight Data Records - Towers

1.5.1 Preparation

1.5.1.1 Recording information

Record all control data and flight information on either paper strips, or traffic running sheets as appropriate for the position.

1.5.1.2 POB recording

Record POB advice on strips.

1.5.1.3 Create paper strips

Unless traffic running sheets are used, create a paper strip for any flying activity associated with the tower for which a FDE is not created.

1.5.1.3.1 Exception

Strips need not be prepared for flights operating outside the tower hours of operation.

1.5.1.4 Flight plan retention

Retain flight plans for flights scheduled to operate outside tower hours until the tower re-opens.

1.5.1.5 Strips for each flight

Represent each flight with one or more strips to provide a plot of the aircraft's expected movements throughout the area of responsibility.

1.5.1.5.1 Exception

Not applicable when traffic running sheets are used.

1.5.1.6 Cover flight in the area

Prepare strips for flights in the area for which the affected position is required to provide an air traffic service.

1.5.1.6.1 Exception

Not applicable when traffic running sheets are used.

1.5.1.7 Pre-flight clearances for military aircraft

Prepare strips covering all pre-flight clearances for military aircraft.

1.5.1.8 Flight plan not lodged

If a flight plan has not been lodged at the time of clearance, prepare strips based on the information provided. Enter a provisional EST based on EOBT in Position 2e of strips for:

a) the departure point;
b) the entry fix for other sectors through which clearance has been arranged; or
c) any other fix at which it is considered necessary to note the reservation of airspace made effective by the pre-flight clearance.

1.5.1.8.1 Position 4b

Enter the period for which the level is reserved in Position 4b.

1.5.1.9 SMC/ACD responsibility

The SMC/ACD, where established, is responsible for the preparation of all strips from information provided by:

a) flight plans;
b) flying programs; or
c) verbal advice of flight details.

1.5.1.10 Make entries in ink

Use ink, as follows, to make entries on strips or traffic running sheets:

a) Blue or Black ink;
b) Red ink to record emergency or unusual situations only; and
c) Other colours to distinguish particular routes if desired.

1.5.1.11 Incorrect or revised written data

Cross out incorrect or revised data with a line and add the correct data beside it. Do not erase incorrect entries. If a mistake is made when preparing a strip, make a new one.

1.5.1.12 White local strips

Use white local strips or traffic running sheets to record details of circuit training operations at the primary aerodrome within Class D CTRs.

1.5.1.13 Coloured strips

Use the following coloured strips or holders to distinguish between flights:

a) blue for outbound;
b) buff for inbound; and
c) pink:
   i) to display random flights, e.g. local photographic survey;
   ii) as a secondary display to other strips, to permit more than one controller to refer to the data;
   iii) as a cross reference to primary data recorded on a strip under another designator; or
   iv) for overflying flights if buff in/blue out is not appropriate.

1.5.1.13.1 Exception - traffic running sheets

The use of pink strips is not applicable when traffic running sheets are used.

1.5.1.13.2 Exception - Metro D towers

When coordination with adjoining ATS units is not required, you may use white local strips or traffic running sheets to record details of flights arriving, departing or operating within the CTR at Metro D towers.

1.5.1.14 Traffic running sheet format

Running sheets formats must represent the airspace and runways, enabling the display of aircraft that are likely to be in conflict with each other in a common area with the following minimum requirements:

a) The date, time started, time completed and sequence number of each sheet. Sheet start and finish times are not required where individual departure or arrival times are annotated;
b) A column to represent each approach point headed with the abbreviation for the approach point or where multiple approach points preclude this, a single column headed INBOUND/TRANSIT (INBD/TRST);
c) Where a single column is used for multiple approach points, an abbreviation for the approach point or aircraft's track must be annotated next to the call sign;
d) A column headed ARR or SEQUENCE record the landing sequence;
e) A column headed DEP to record take-offs, adjacent to the ARR column; and
f) A column or space for recording special operations such as helicopter training area operations if required.

1.5.1.14.1 Significant times

Unless individual landing times are recorded draw a horizontal across RWY columns on the hour and if time permits each half hour.

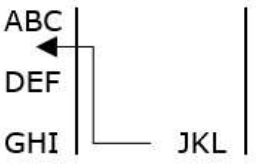
1.5.1.14.2 Prompts and physical barriers

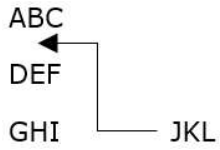
Publish display requirements for location specific memory prompts in Local Instructions.

Note: Display requirements for Runway Occupied and Men and Hand Tools strips on traffic running sheets are specified in 12 Aerodrome control.

1.5.1.14.3 Traffic Sheet Annotations

Use the following table to complete traffic running sheets. Specify instructions abbreviations and annotation not covered by this table in Local Instructions.

Situation	Column	Notes	Example
Ready	DEP	The ACID should be aligned as closely as possible to the ACID in the Landing column that may be a dependency.	ABC
Line up	DEP	A line to be drawn under the ACID.	ABC
	DEP	Tracking intentions/point next to ACID (ready call) (tracking point optional to indicate non-standard route).	ABC X (crosswind) ABC RD (right downwind)
Cleared for take-off	DEP	A tick placed next to the ASID in the departure column. When the aircraft is airborne, a diagonal line drawn through the ACID and/or the tick indicates the runway is no longer occupied by that aircraft.	ABC √ ~~ABC √~~ or ABC ~~√~~
Inbound point	APCH Point INBD/TRST SEQ/ARR	ACID annotated in the relevant columns in position or sequence order. Approach point abbreviation published in local instructions used when number of approach points preclude a separate column for each approach point. Non-standard routes/circuit entry to be annotated.	ABC ABC G ABC LD (left downwind)
Landing Aircraft sequenced to the RWY	SEQ/ARR	ACID in landing sequence order (entering the circuit or downwind/base report) (where required include intentions next to ACID).	ABC
		Aircraft cleared for requested action.	ABC √
		Aircraft has vacated the runway.	~~ABC~~ √ or ABC √ 2305
Aircraft changed to alternate runway or HLS		Where traffic sheets depict individual columns for each runway, the preferred method is to re-write the ACID in the revised landing column in the updated order. If unable then draw an arrow from the ACID to the appropriate place in the revised column.	
Take-off and landing times	DEP/ARR	Individual landing times are to be annotated for abnormal operations and other landing where practicable. Take-offs times may be annotated where an operational benefit is desired (e.g. for wake turbulence).	ABC √ 2305
Altitude		record non-standard altitudes for departures and arrivals.	25 ABC
Tracks		Inbound and outbound tracks to be annotated adjacent to the ACID using approved annotations or abbreviations when the track is non-standard.	ABC RI (Richmond DCT)

Situation	Column	Notes	Example
Updating the sequence		The preferred method is to re-write the ACID in the landing column in the updated order. If unable then draw an arrow from the ACID to the appropriate entry in the sequence.	

1.5.1.15 Plain white strips

Use plain white strips for displaying operational information, e.g. NOTAM, MET.

1.5.1.15.1 Reverse side of blank strip

You may use the reverse side of a blank strip to record operational information.

1.5.1.16 Strip variations

LIs may vary strip preparation, annotation and display.

1.5.1.17 Recorded/original time

Record all clearances, control instructions and traffic information when the message is given to the aircraft.

1.5.1.17.1 Entries

Enter the time on the strip immediately after:

a) taxiing;
b) take-off; and
c) landing.

Record times for take-off and landing using 'wheels off' and 'wheels on' respectively. Ensure times for aircraft and helicopters indicate last/first ground contact.

1.5.1.18 Formation flights

Workload permitting, record the registrations of all aircraft participating in non-military formation flights:

a) in box 11 of the strip; or
b) next to the formation callsign on a running sheet.

1.5.1.18.1 Automation

If an FDR exists for each aircraft, you may automate this record by having each aircraft couple prior to landing. Otherwise, record the registrations on the flight strip and forward this to Avcharges.

1.5.2 Strip Display

1.5.2.1 Information on aircraft movements

Display information on aircraft movements to permit ready data analysis and assist in providing a safe, orderly and expeditious flow of air traffic.

1.5.2.2 Specific display instructions

Refer to LIs for display instructions specific to the individual tower's requirements.

1.5.2.3 Chronological arrangement of strips

Arrange strips to represent a relevant chronological order when the position recording flight information is not responsible for resolving traffic conflictions.

1.5.2.4 Temporary increase of traffic

When a control area has been designated to cover temporary increases of traffic, prepare the designator for the fixes to be used and arrange on the flight progress board in positions that permit efficient control of traffic in the area concerned.

1.5.2.5 Data for more than one controller

Display data to which more than one controller must refer:

a) in a bay to which both controllers may readily refer;
b) by duplicating the strips; or
c) written on each controller's traffic running sheet.

Note: *A pink strip may be used on the position that does not hold communication with the aircraft.*

1.5.2.6 Anticipate control problems

Arrange strips on a flight progress board:

a) so that it represents the expected traffic; and
b) to allow controllers to anticipate control problems.

1.5.2.6.1 Exception

Not applicable when traffic running sheets are used.

1.5.2.7 Divide the board - potential conflict

Divide the board so that strips relating to aircraft that are likely to conflict with each other appear in a common bay or portion of a bay.

1.5.2.7.1 Pre-arrange the divisions

Pre-arrange the divisions of each board to relate to various stages of flight, geographical areas or fixes at which confliction is most likely to occur.

1.5.2.7.2 Exception

Not applicable when traffic running sheets are used.

1.5.2.8 Arrivals bay

Pre-arrange the arrivals bay to contain an active designator with strips for:

a) pending arrivals above; and
b) aircraft under aerodrome control below.

1.5.2.8.1 Exception

Not applicable when traffic running sheets are used.

1.5.2.9 Departures bay

Pre-arrange the departures bay to contain a taxiing and a departed designator.

1.5.2.9.1 Exception

Not applicable when traffic running sheets are used.

1.5.2.10 Strip preparation bay

Use the strip preparation bay for storing blank strips and skeleton strips containing information on departing aircraft that have not yet established communication with the Control tower.

1.5.2.11 Basic data strips

Place strips on which basic data has been entered and are not required immediately in a suspense bay.

1.5.2.12 Departure fix designator

Place strips for the aircraft's departure fix above the departure fix designator. Place the strip below the strip designator when:

a) a clearance for that flight has been issued; or
b) the departure time is received, where no clearance for departure is required.

1.5.2.13 Traffic pattern checks

Check the effect of the flight plan on the traffic pattern when placing strips below the designator.

1.5.2.14 Time sequence

Place strips under the designator strip in time sequence. Place the strip representing the flight with the earliest EST at the bottom of the appropriate bay.

1.5.2.15 Major aerodrome arrival point

Strips in the bay representing the arrival point at a major aerodrome are displayed in order of assigned level, after descent clearance is issued.

1.5.2.16 File used strips

When a strip is no longer required:

a) remove the strip from the flight progress board;
b) extract it from the strip holder; and
c) file it in chronological order.

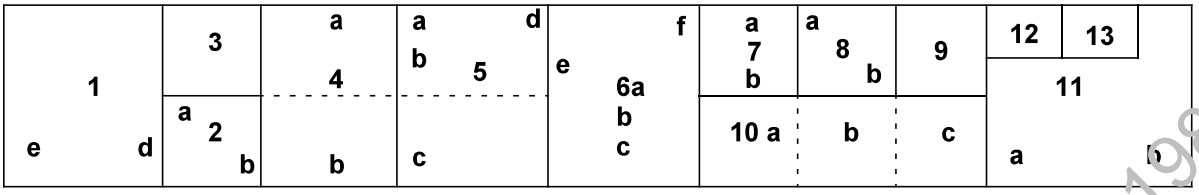
1.5.2.17 Avcharges

At 2359L (H24 Towers) or unit close, collate and forward Avcharge strips or traffic sheets to Avcharges. If there are no strips or traffic sheets for a particular day, forward a Nil return.

Note: *UTS responsibilities for the collection and dispatch of flight strips and traffic sheets revenue data are detailed in Aviation Revenue Procedure (C-PROC0182).*

1.5.3 Strip formats - Class D towers (and INTAS Business Continuity)

1.5.3.1 Departures

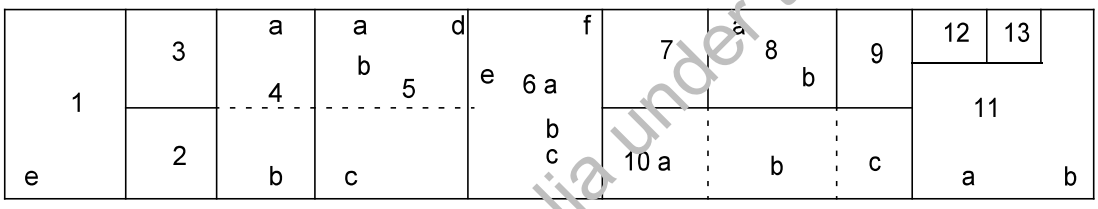


Use the table below to complete departure strips:

Position	Information
1e	EOBT in hours and minutes, with hours accentuated.
2	The actual time of departure (ATD) on receipt, when required in accordance with local instructions or when required for the calculation of time based separation.
3	The actual time at which the aircraft is transferred to the next control or communication authority, if not within three minutes of the ATD. If necessary, include the frequency to which the aircraft is to transfer.
4a	En route or airways clearance, SID identifier and/or departure route on which the aircraft is cleared. Requested route when a pilot notifies intentions for an abbreviated clearance. When AMENDED ROUTE is stipulated in the clearance, insert the abbreviation AR before the SID identifier or the description of the route to be flown.
4b	Requirements/tracking restrictions/departure instructions. Symbol and callsign of aircraft step climb restriction.
5a	Planned level, or tower standard assignable level (whichever is lower), or level requested when the pilot notifies intentions for an abbreviated clearance.
5b	Amended flight level, if available. When AMENDED LEVEL is stipulated in the clearance, insert the abbreviation **AL** immediately before the level.
5c	Initial level to which the aircraft is cleared after departure, if other than level at 5a/b. ***Note:*** *See 1.5.5 Annotations for approved annotations.*
5d	Altitudes/levels reported vacated on climb.
6a	PANS OPS performance category, followed by aircraft type, followed by weight category (optional); separated by **/** (e.g. A/BE36/L).
6b	Type of operation and aircraft registration (if different from callsign).
6c	Aircraft callsign in LARGE print.
6e	Flight Rules
6f	Climbing IAS on departure strip when required and, when necessary, cruising IAS. ***Note:*** *See 1.5.5 Annotations for approved annotations.*
7a	Runway/HLS
7b	For intersection departure - Runway/Taxiway intersection holding point designator (e.g. B1; or X to indicate a runway intersection).
8a	Time at which aircraft is to start engines, if applicable.

Position	Information
8b	Time taxiing commenced
9	Time of take-off
10a	The radial or track on which the aircraft is expected to depart.
10b	Details of the route to be flown/reporting point if necessary.
10c	The airfield of next intended landing/destination.
11	Serviceable navigation aids carried, PBN codes, special remarks, control data, instructions and/or information, callsigns or types of aircraft on which information has been issued, diagonal red line of navaid deficient for category of operation.
11a	The total number of persons on board the aircraft as advised by the pilot.
11b	Any revised fuel endurance advised by the pilot.
12	Serviceable SSR equipment carried.
13	The assigned discrete SSR code (except a permanently allocated airframe code).

1.5.3.2 Arrivals



Use the table below to complete arrival strips:

Position	Information
1e	ETA in hours and minutes, with hours accentuated.
2	Time of transfer and, if the report is at other than the standard transfer point, an abbreviation for the position at transfer.
2a	Abbreviation for the position at transfer or position of initial call.
2b	Actual time of call on transfer or first contact.
3	Time at which either a scheduled report or call after a change of frequency is expected.
4a	Route clearance and requirements/restrictions issued.
4b	The approach clearance(s) or STAR issued to the aircraft, as applicable. Symbol and callsign of aircraft step descent restriction.
5a	The last level assigned to the aircraft by the preceding authority before transfer, if applicable, or level requested by the aircraft. Pilot advised level when assigned an abbreviated clearance.
5b	Intermediate levels assigned by controlling authority. ***Note:*** *See 1.5.5 Annotations for approved annotations.*
5c	Last level assigned by controlling authority (may include VSA). VSA when assigned an unrestricted abbreviated clearance.
5d	Reported inflight conditions (if applicable) and levels vacated on descent.

Position	Information
6a	PANS OPS performance category, followed by aircraft type, followed by weight category (optional); separated by / (e.g. A/BE36/L).
6b	Type of operation and aircraft registration (if different from the aircraft's callsign).
6c	Aircraft callsign in LARGE print.
6e	Flight Rules
6f	Descending IAS on arrival strip when required and, when necessary, cruising IAS ***Note:*** *See 1.5.5 Annotations for approved annotations.*
7	Runway or HLS on which aircraft will land.
8a	Time aircraft was cleared for final approach or time at which aircraft will begin final approach.
8b	Time aircraft began final approach.
9	Time of landing
10a	The identifier for the airfield from which the aircraft departed.
10b	Where necessary, any details of the route to be flown/reporting points.
11	Serviceable navigation aids carried, PBN codes, special remarks, control data (e.g. expected approach times), instructions and/or information. When necessary, the abbreviation for the alternate, total time interval and planned level to alternate or SARTIME (in red, when not held by SARTIMES). Callsigns or types of aircraft on which information has been issued, diagonal red line if navaid deficient for category of operation.
11a	The total number of persons on board the aircraft as advised by the pilot.
11b	EOBT where known
12	The serviceable SSR equipment carried.
13	The assigned discrete SSR code (except a permanently allocated airframe code), if applicable.

1.5.3.2.1 Missed approach

If a missed approach occurs or is likely:

a) divide boxes 7, 8 and 9 equally by a horizontal line to permit entries relating to the aircraft's second approach;

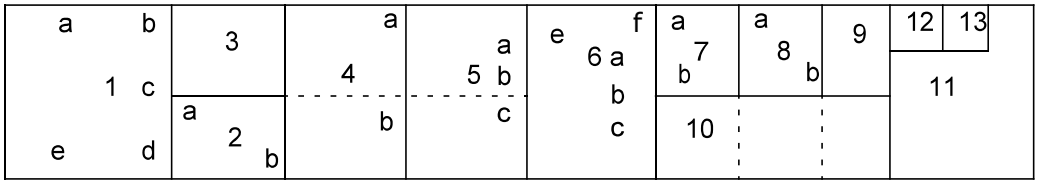
b) insert the abbreviation M/A and the time of the missed approach in the upper half of the box; and

c) make a new strip if there is insufficient room on the existing strip for additional data.

1.5.3.2.2 Diverted aircraft

If the aircraft is diverted, insert the abbreviation for the alternate aerodrome and the time of diverting instead of the landing time.

1.5.3.3 Overflying strips (pink)



Use the table below to complete a pink strip:

Position	Information
1b	The approved abbreviation for the fix. If the position is designated as an 'abeam position' in the route specifications (AIP/MAP), and the flight is being conducted in accordance with those specifications, the abbreviation 'A/' preceding the fix may be used.
1c	The flight planned time interval from the previous fix.
1d	Coordination abbreviation (if applicable).
1e	ATC estimate for the fix, amended as necessary and entered as a four-figure group, with the hour figures accentuated. Add the letters CK over the hour figures where the EST is based on an EOBT.
2	a) The position/fix designator or distance from the fix; and b) The actual time at 2a.
3	The time at which either a scheduled report or a call after a change of frequency is expected. Tick the time when the aircraft calls. If the aircraft does not call within three minutes of the expected time, enter the actual time of receipt.
4a	The airways clearance.
4b	When calculated, the time of entering or leaving lateral conflict with another aircraft or route. Level requirements, e.g. R370 X 100S DURRA. A clearance limit other than destination or the limit of controlled airspace. Restrictions from another unit. Sighting and passing annotations. Symbol and callsign of aircraft step climb/descent restriction.
5a	The initial cruising level planned in control area (see also position 11). If planned cruise level cannot be approved, draw a line through it and insert alternative levels or altitudes beneath. A reported cruising level subject to a further check. Circle this figure. When a pilot is instructed to change level or when a request for a change is approved, insert the new level beneath the previous entry. Draw a horizontal line through the previous level on receipt of a report of leaving that level or reaching a new level. When reports at intermediate levels are required, enter these levels. Enter pilot reported VFR levels to the right hand side of box 5. ***Note:*** *See 1.5.5 Annotations for approved annotations.*
5b	Reported in flight conditions (if applicable) and levels reported vacated on climb or descent.

Position	Information
5c	The abbreviation VSA when a visual approach has been authorised, or the abbreviation DME when a DME arrival has been authorised.
6a	PANS OPS performance category, followed by aircraft type, followed by weight category (optional), separated by an oblique stroke (e.g. C/A320/M).
6b	Type of operation and aircraft registration (if different from the aircraft's callsign).
6c	Aircraft callsign, entered in LARGE print.
6e	Flight rules
6f	Climbing IAS when required and, when necessary, cruising IAS. ***Note:*** *See 1.5.5 Annotations for approved annotations.*
7	Previous fix and estimate if required.
8	In (a) actual time at the previous fix, and in (b), flight level reported at the previous fix.
9	The time of landing. This is not required where the data specified for position 2 (3) has been entered. Circle the position after receiving an 'in-circuit report' if the pilot advises intention to call on the ground.
10	Departure point and time (where necessary), route information and destination point (where necessary).
11	Control data and in-flight information data starting in the upper left corner and including: a) holding instructions. When there is more than one holding aid available, enter an abbreviation for the holding aid on the strip for the fix closest to that aid; b) expected approach time on the arrival strip entered in hours and minutes when calculated. Tick this figure when the pilot has been advised; c) a new cruising level in control area requested by flight plan. Insert the level requested on the strip for the fix at which the change is desired; d) record traffic information issued by inserting the callsigns or types or numbers of aircraft on which information has been issued; e) POB; f) any other data used for control/coordination purposes not recorded elsewhere, e.g.: i) terms and airspace limitations of a radar release; ii) ATS surveillance system plots: record the time in minutes followed by magnetic bearing and distance; or iii) clearance void time; g) serviceable navigation aids carried and PBN codes. Red diagonal line if navaid deficient for that category of operation; h) when necessary, the abbreviation for the alternate, total time interval and planned level to alternate; i) when calculated, the latest divert time in red as a four-figure group; j) insert the abbreviation V/ (e.g. V/SFL – AD) before the segment when an aircraft operating IFR requires to operate VFR for a particular route segment; and k) the callsign(s) of traffic issued.
12	The serviceable SSR equipment carried.
13	The assigned discrete SSR code.

1.5.3.4 Local strips (white)

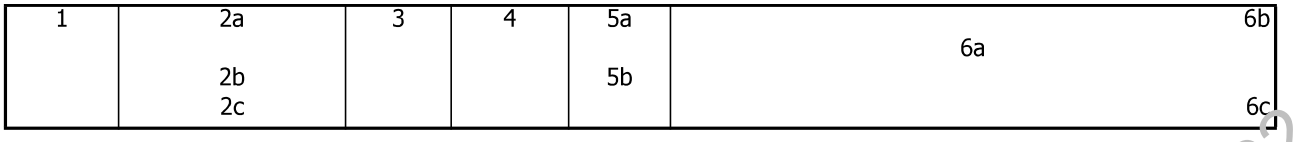
<table>
<tr><td rowspan="2">1</td><td>3</td><td>4a</td><td>5a</td><td rowspan="2">e
6a
b
c</td><td>7</td><td>8</td><td>9</td><td rowspan="2">11</td></tr>
<tr><td>2</td><td>4b</td><td>5b</td><td>10a</td><td>10b</td><td>10c</td></tr>
</table>

Use the following table to complete white local strips:

Position	Information
1	Number of circuits or touch and gos, indicated by crosses.
2	Inbound approach point (if required) (Metro towers only).
3	Outbound tracking information (if required) (Metro D tower only).
4a	Destination or **C** for circuit (Metro towers only), CIRA (Regional towers).
4b	Inbound clearance (if required) (Metro D only).
5a	Circuit or outbound altitude or altitude restrictions or requirements (if required). ***Note:*** *See 1.5.5 Annotations for approved annotations.*
5b	Inbound altitude or altitude restrictions or requirements. VSA when assigned an unrestricted abbreviated clearance (Metro towers only). ***Note:*** *See 1.5.5 Annotations for approved annotations.*
6a	Aircraft type
6b	Registration, if different to callsign
6c	Callsign
6e	Flight rules (if required).
7	Departure runway or HLS
8	Four digit taxi time
9	Airborne time
10a	Arrival Runway or HLS
10b	Free text
10c	Landing time (four digits if the hour is different to taxi time).
11	POB Dual/Solo Box 1 overflow. Number of circuits or touch and gos, indicated by crosses.

1.5.4 Strip formats - Eurocat towers

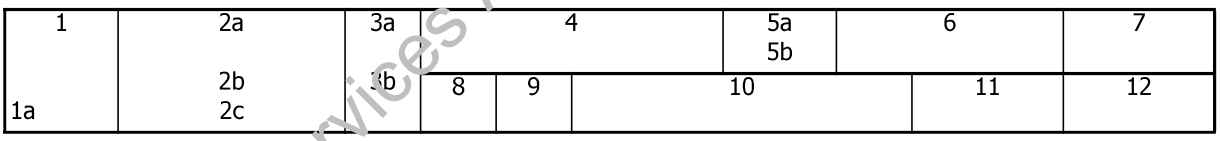
1.5.4.1 Inbound



Use the table below to complete inbound tower strips:

Position	Information
1	ADEP
2a	ACID
2b	Aircraft type, Wake Turbulence Category, Flight rules if not IFR, ADES.
2c	Field 18/FMF Data, Type of flight, Performance category.
3	Runway or HLS (controller entered).
4	Aircraft Parking Bay - Area (controller entered unless annotated in position 6a of the paper strip).
5a	ETA
5b	Landing Time (controller entered).
6a	Aircraft Parking Bay - Area/Miscellaneous (controller entered).
6b	SSR code
6c	POB

1.5.4.2 Outbound

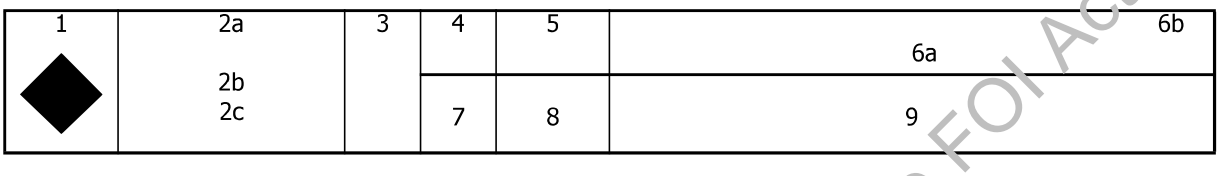


Use the table below to complete outbound tower strips:

Position	Information
1	EOBT
1a	POB
2a	ACID
2b	Aircraft type, Wake Turbulence Category, Flight rules if not IFR, ADES.
2c	Field 18/FMF Data, Type of flight, Performance category.
3a	Runway or HLS (controller entered).
3b	Runway/Taxiway intersection (controller entered).
4	Flight Planned Route (including added system SID points).
5a	RFL
5b	CFL (controller entered if different from RFL).
6	SID (controller entered)/Cleared route (controller entered if different from flight planned route)/STAR (controller entered if issued with airways clearance).

Position	Information
7	SSR code
8	Aircraft Parking Bay - Area.
9	Taxi time (controller entered).
10	Departure instruction (controller entered).
11	Take-off time (controller entered).
12	Departure Frequency (controller entered).

1.5.4.3 Overflight



Use the table below to complete overflight tower strips:

Position	Information
1	ADEP
2a	ACID
2b	Aircraft type, Wake Turbulence Category, Flight rules if not IFR, ADES.
2c	Field 18/FMF Data, Type of flight, Performance category.
3	Runway/HLS (controller entered as required for NAT/training).
4	Times (controller entered times of missed approach/take-off/landing as required).
5	ETA (controller entered if not entered from FDR).
6a	Instrument Approach/Clearance (controller entered).
6b	SSR code
7	Not used
8	Not used
9	Miscellaneous/Departure Instruction/POB (controller entered).

1.5.5 Annotations

Use the following annotations when recording information on strips or entering data into the FDR.

You may use annotations from other sections of Part 1 if required.

Time		
Information/instruction	**Meaning and usage**	**Annotation/example**
Four-figure time group	Expected or actual times of occurrences. Use four-figures, unless stated otherwise. Accentuate hour figures.	10^{51}

Time		
Information/instruction	**Meaning and usage**	**Annotation/example**
Two-figure time group	Expected or actual times of occurrences. Use when an associated four-figure entry is already annotated or the hour to which the two-figure time refers is obvious and there is no possibility of confusion.	51
Latest Divert Time		LDT

Flight rules		
Information/instruction	**Meaning and usage**	**Annotation/example**
Instrument Flight Rules (IFR)		I
Visual Flight Rules (VFR)		V
IFR then VFR		Y
VFR then IFR		Z

Types of operation		
Information/instruction	**Meaning and usage**	**Annotation/example**
Scheduled air service		S
Non-scheduled air transport operation		N
General aviation		G
Military		M
Covert Operations		CVT
If other than any of the defined categories		X

Performance category and special priority		
Information/instruction	**Meaning and usage**	**Annotation/example**
PANS OPS performance category	Only required at locations where PANS OPS instrument approach procedures apply, e.g. A/BE36, D/B74B	A, B, C, D, E
HEAD	Head of State	HEAD
MILSPECREQ	Military Special Requirements	SPECREQ SR
MEDEVAC	Medical Emergency Evacuation	MED
HOSP	Hospital	HOSP
FFR	Flood or Fire Relief	FFR
SAR	Search And Rescue	SAR
Note: *Enter in red above the PANS OPS category. For Eurocat towers FPS circle in red.*		

Level		
Information/instruction	**Meaning and usage**	**Annotation/example**
Aircraft level	a) Two or three figure group; b) Record flight levels or altitudes of 1000 FT or greater as multiples of 100 FT; and c) Record altitudes of less than 1000 FT as a two-digit number beginning with zero (0), followed by the multiple of 100 FT.	FL177 A01
Above Ground Level	Record on the right-hand side of the height above the ground or water level	200AGL
Maintain level	Departure instruction M(level)	M80
Maintain/climb to and maintain visual level		M70 V
Assigned visual level	(level)V	70V
Assigned level not below the DME steps	(level)D	30D
Assigned level not below the GNSS steps	(level)G	30G
Amended Level		AL080
Climb to (level)		↑120
Descend to (level)		↓180
VFR Departure	Record assigned level on the left-hand side	15VD
Special VFR	Record assigned level on the left-hand side	15SV

Level		
Information/instruction	**Meaning and usage**	**Annotation/example**
Level as cleared by ATC		160→
Not above (level)		$\overline{60}$
Not below (level)		$\underline{50}$
Block Level Clearance		130 100

Speed		
Information/instruction	**Meaning and usage**	**Annotation/example**
Cruising indicated air speed	Record on the left-hand side of the indicated airspeed	→120
Descending indicated airspeed	Record on the left-hand side of the indicated airspeed	↓180
Climbing indicated airspeed	Record on the left-hand side of the indicated airspeed	↑200
Maintain indicated airspeed or **less**	(IAS)L $\overline{\text{IAS}}$	250L $\overline{250}$
Maintain indicated airspeed or **greater**	(IAS)G $\underline{\text{IAS}}$	250G $\underline{250}$
Indicated airspeed (Eurocat towers)	(speed)K	120K

Route/position		
Information/instruction	**Meaning and usage**	**Annotation/example**
Location indicator	Standard three or four letter location indicator available in ERSA. Reduce indicator to the last two or three letters where no confusion is likely.	YBBN YMML BN BNA
Waypoint name	Five letter positions can be reduced to three letters as long as no confusion will exist	GULUM GUL
Full location name	Where no standard indicator is available, and LIs do not specify	Bruce Rock

Route/position		
Information/instruction	**Meaning and usage**	**Annotation/example**
Location indicator and bearing and distance	Position expressed as bearing and distance from a datum. Omit the location indicator when: a) a common datum is being used for all such recorded positions; b) no confusion is likely; c) the distance is expressed as a minimum of two figures; and d) bearing and distance figures are separated by an oblique stroke.	BN150032 or 150/32
Amended route	When assigned route differs to that planned.	ARENAMBSY
Re-cleared		RC
Flight planned route		FPR
Abeam	When aircraft will not over-fly a specific place.	A/ARM
Dead reckoning		DR

Requests, requirements and restrictions		
Information/instruction	**Meaning and usage**	**Annotation/example**
Request	Aircraft request	R30L, R370
No restrictions		NR
No vertical restrictions		NVR
No lateral restrictions		NLR
No restrictions on descent		NRD
No restrictions on climb		NRC
No frequency requirements		NFR
No frequency requirements or restrictions		NRR
R(level)X(posn)	Requirement to reach a level by a position.	R150XGULUM
R(level)X(dist)(posn)	Requirement to reach a level by a distance before a position.	R180X50MCO
R(level)X(posn)(dist)	Requirement to reach a level by a distance after a position.	R200XMCO50
R(level)X(time)	Requirement to reach a level by a time (two or four figure time group).	R150X45 or R150X0145
Reach by	Where the requirement is to reach the cleared flight level by distance or time and no confusion will exist.	X20BN X1015
Note: *Five letter positions can be reduced to three letters as long as no confusion will exist.*		

Operational information		
Information/instruction	**Meaning and usage**	**Annotation/example**
VFR-on-top		VT
IFR Pick-Up		PU
Surveillance Information Service		SIS
At		@
Operations normal		OPS
Unanswered Call		UC
Broadcast		B/
QNH		Q1013
Information is checked and correct	a) An aircraft has acknowledged receipt of control instructions, assigned level, or other information; b) An aircraft's reported operations agree with expected or assigned operations already recorded; c) A particular action has been taken or a particular requirement has been met; d) A frequency or control transfer is carried out within the specified time; e) When an instruction or requirement in the GLOBAL_OPS_INFO field has been passed on behalf of another unit; **Class D towers:** f) Tick to Departure strip (box 8) - indicates taxi coordination completed to next agency; and g) Tick to Departures strip (box 1) through coordination symbol - indicates next call or departure time completed with next agency.	✓ < (in FDR)
Separate groups of information	Use a '\' symbol to avoid confusion when entering related groups of figures, and/ or letters in close proximity.	150\10
Non-duty runway in use	When other than the runway nominated on the ATIS is used.	17 Red circle around runway number
Or\until		\
Alternative instructions		( )
Clearance limit (FIX)	F\Location or position	F\CSV
Sighting and passing		S + P(callsign)

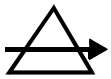
Operational information		
Information/instruction	**Meaning and usage**	**Annotation/example**
Sighting and follow		S + F(callsign)
Calculated time of passing		TP
Vectoring for		R\
SARTIME		S
Unrestricted		U
No IFR Traffic		NIT
Cancel SARWATCH	IFR aircraft cancelled SARWATCH prior to the circuit area or destination ETA.	CSW
Hazard Alert		HA
System Estimate	When an ETO alert cannot be resolved.	SE47

Coordination		
Information/instruction	**Meaning and usage**	**Annotation/example**
Group Designator	Unit designator with whom coordination is completed.	PIY<
Group	When an abbreviated form is acceptable: S=Sector D=Departures.	 S D

Emergency phases		
Information/instruction	**Meaning and usage**	**Annotation/example**
Alert phase		A
Distress phase		D
Uncertainty phase		U

SCNS		
Information/instruction	**Meaning and usage**	**Annotation/example**
RNAV5		Z5
RNP4		Z4
RNP2		Z2
RNP1		O1 or O2
RNP APCH		S1 or S2
RNP AR APCH		T1 or T2

Approach/arrivals/departures		
Information/instruction	**Meaning and usage**	**Annotation/example**
Visual Approach		VSA
DME arrival		DME
TACAN approach	Followed by number if applicable.	TAC
NDB approach		NDB
Missed Approach		MA
GPS arrival		GPS
GNSS arrival		GNSS
RNAV approach	Include approach designator when more than one RNAV approach exists for RWY in use.	RNAV [RWY] RNAV U [RWY]
VOR approach		VOR
ILS approach		ILS
Visual Departure	LIs may allow abbreviations to V (civil only).	VSD
Note: *Applicable designators may precede the abbreviation.*		

Clearance		
Information/instruction	**Meaning and usage**	**Annotation/example**
Enter controlled airspace		
Leave controlled airspace		
Cross controlled airspace		
Remain outside controlled airspace		
Note: *The position of the arrow may be moved to reflect the trajectory of the aircraft.*		

Departure instructions - surveillance			
Information/instruction	**SID assigned**	**No SID assigned**	**Annotation /example**
LEFT [RIGHT] UNRESTRICTED	Not applicable	No restrictions	L [R]
CANCEL SID (followed by alternative instructions)	Cancel SID	Not applicable	CNL
TRACK EXTENDED CENTRE LINE (three digits) DEGREES, UNRESTRICTED	Radar SID, or Cancel procedural SID Maintain runway track Climb unrestricted	Not applicable	TEC
TURN LEFT [RIGHT] HEADING (three digits) UNRESTRICTED	Cancel SID Turn onto assigned heading Climb unrestricted	Turn onto assigned heading Climb unrestricted	L [R] 040
	or where the SID requires an initial heading: a) turn onto assigned heading; b) fly assigned SID; and c) climb unrestricted.		
UNRESTRICTED	**or** As a reminder of a published initial heading: a) fly assigned SID, including published heading; and b) climb unrestricted.		L [R] 120 or U
TURN RIGHT [LEFT] HEADING (three digits), TO INTERCEPT OUTBOUND TRACK, UNRESTRICTED	Cancel SID Fly assigned heading to make pilot intercept of outbound track Climb unrestricted	Fly assigned heading to make pilot intercept of outbound track Climb unrestricted	R [L] 070 P
HEADING (three digits) (When the heading approximates runway bearing and no turn is required.)	Cancel SID Fly assigned heading Climb unrestricted	Fly assigned heading Climb unrestricted	H140
UNRESTRICTED	Unrestricted Fly assigned SID	Not applicable	U
CLIMB TO (level)	Fly assigned SID Maintain assigned level	Maintain assigned level	M60

LAHSO instructions		
Information/instruction	**Meaning and usage**	**Annotation/example**
LAHSO approved		LA
LAHSO operations advised		LO
Passive LAHSO only		PL
Negative LAHSO		XX

This page is intentionally blank

2 Operational context

2.1 NAPM Administration

2.1.1 Operational concept

2.1.1.1 Purpose

NAPM details the procedures used to standardise service delivery when using Eurocat, INTAS and other system tools and must be applied by all ANS Branches and the NCC.

2.1.1.1.1 Differences

The OSM may approve differences to these instructions, which must be specified in LIs.

2.1.1.2 Presentation, style and structure

Where appropriate this document is similar to Manual of Air Traffic Services (MATS) (NOS-SAF-2000). See MATS Chapter 2.1 MATS administration for structure description.

2.1.1.3 Delivery

NAPM is primarily an electronic document with controlled printed copies available for ATS units.

2.1.1.4 Change process

Submit a change proposal to ATS Integrity (Operational Standards) for review before registering an RFC through the NRFC process as per National ATS Administration Manual (NAAM) (ATS-MAN-0013) Part 6 Change Management.

2.2 Air Traffic Services

2.2.1 ATS objectives

2.2.1.1 Duty of care

Upon becoming aware of information such that it would be reasonable to conclude that an unsafe situation has, or may occur, it would be expected that all necessary action is taken to remove that risk.

Note: *The extent of the action required will be driven by professional judgement given the particular circumstances and would include an assessment of the likelihood of the event occurring and the potential severity of the outcome.*

2.2.1.2 Reasonable assurance

A controller's professional judgement that they have 'reasonable assurance' of achieving a particular separation standard requires them to be certain that:

a) the disposition and relative performances of all aircraft, vehicles or persons concerned are such that at all times and under normal operation the separation between them will not be less than that mandated;
b) if the anticipation of an aircraft, vehicle or person operating in the expected way is essential to achieving separation then that aircraft, vehicle or person is provided with sufficient information to make them aware of the dependency; and
c) any equipment, the continued operation of which is necessary to assure separation, is operating within normal parameters and there is no reason to expect that the serviceability or performance will change.

2.3 Traffic Priorities

2.3.1 Curfew procedures at YSSY, YPAD, YMEN and YBCG

2.3.1.1 NCC requirements

Immediately upon receipt of Curfew Approval Advice, the NCC must for:

a) YPAD approvals - phone Adelaide TCU and forward the email advice to:
   i) Adelaide Tower;
   ii) Adelaide TCU;
   iii) ML ORM; and
   iv) ncis.investigators@airservicesaustralia.com;
b) YSSY approvals - phone the Sydney Traffic Manager and forward the email advice to:
   i) Sydney Tower;
   ii) Sydney Traffic Manager;
   iii) ncis.investigators@airservicesaustralia.com; and
   iv) if they were not included on the original email, duty.manager@syd.com.au and car2@syd.com.au;
c) YBCG approvals - phone BN ORM and forward the email advice to:
   i) Gold Coast Tower;
   ii) BN ORM; and
   iii) ncis.investigators@airservicesaustralia.com; and
d) YMEN approvals - phone ML ORM and forward the email advice to:
   i) Essendon Tower;
   ii) ML ORM; and
   iii) ncis.investigators@airservicesaustralia.com.

2.3.1.2 ATC requirements

Upon receipt of Curfew Approval Advice, ML ORM, BN ORM, Adelaide SM or SYTM must coordinate with the relevant tower.

2.3.1.3 Procedure for curfew non-compliance

If you wish to establish the intentions of an aircraft that may not comply with a curfew:

a) consult with the pilot as early as possible;
b) remind the pilot of curfew requirements using the phrase

'CURFEW RESTRICTIONS EXIST, PENALTIES APPLY, ADVISE INTENTIONS'; and

c) If a pilot does not comply with a curfew after being reminded:
   i) Process the aircraft; and
   ii) Report the occurrence.

Note 1: *Aircraft may operate during the curfew time period but still be compliant with legislated curfew restrictions.*

Note 2: *ATC is not responsible for aircraft operator compliance with curfew restrictions.*

2.4 Airspace administration

2.4.1 Restricted areas/airspace for civil emergencies

2.4.1.1 Refer request to Office of Airspace Regulation (OAR)

Refer any requests to establish restricted areas or airspace to the Office of Airspace Regulation (CASA).

2.4.2 Fire fighting air operations

2.4.2.1 Background

Depending on the severity of the situation, State fire authorities will advise of fire fighting activities that involve air assets by:

a) National generic Fire NOTAM;
b) Site-specific Fire NOTAM; or
c) Declaration of temporary airspace.

Note: *Each State emergency fire service authority has a section that manages air assets associated with fire fighting.*

2.4.2.2 National generic fire NOTAM

The NOTAM Office will issue a national Fire NOTAM at the commencement of each fire season (usually the beginning of October). This NOTAM remains current until the end of April, and covers the majority of fire situations throughout Australia where low intensity air assets (one to two aircraft) are used. For example:

A) MELBOURNE/BRISBANE FIR

B) When necessary

C) End of April

E) UNNOTIFIED INTENSE AVIATION ACTIVITY ASSW FIRE FIGHTING OPS MAY OCCUR WI 5NM RAD AND BLW 3000FT AGL OF OBSERVED FIRES.

ACFT NOT COORDINATED THROUGH THE RELEVANT STATE FIRE AUTHORITY ARE REQ TO REMAIN CLEAR.

2.4.2.3 Site-specific fire NOTAM

A site-specific Fire NOTAM may be requested when State emergency fire service authorities determine that the generic Fire NOTAM does not satisfactorily cover the scenario. Scenarios that justify a site-specific Fire NOTAM may include:

a) Two to three aircraft operating with ongoing activity where smoke or fire is not apparent to itinerant aircraft; or
b) Where any of the following occur in combination:
   i) Multiple aircraft operating in close proximity;
   ii) Multiple fires in close proximity;
   iii) Significant smoke/visibility issue;
   iv) Activities involve operations in confined areas (e.g. valleys);
   v) Ongoing aircraft operations where smoke or fire is not apparent to itinerant aircraft; or
   vi) Operations involving substantial activity above 5000 FT AGL.

Note 1: *A site-specific Fire NOTAM may be necessary when a higher degree of awareness of fire or aircraft activity is required to cover a specific fire ground.*

Note 2: *The State emergency fire service will fax the request for NOTAM to the duty ORM, then telephone to ensure receipt and discuss.*

2.4.2.3.1 Processing the request

The duty ORM must assess site-specific NOTAM requests for accuracy, justification, impact on controlled airspace etc. and, if acceptable, pass the NOTAM request to the NOTAM Office for processing. See 2.4.2.5 NOTAM template.

2.4.2.4 Declaration of Temporary Restricted Airspace (TRA)

Where the generic or site-specific Fire NOTAM does not afford sufficient protection, the State emergency fire service authority may request the declaration of a TRA. The State emergency fire service authority will submit the request to CASA's Office of Airspace Regulation.

2.4.2.4.1 Conditions requiring a request

A request will be made when fire fighting aircraft operate in an area:

a) adjacent, or in close proximity, to controlled airspace, and there is a risk of fire fighting aircraft infringing such airspace;
b) of high density itinerant aircraft (e.g. light aircraft lane, VFR aircraft route); or
c) of medium density itinerant aircraft when there is reduced flight visibility.

2.4.2.4.2 OAR considerations

OAR may declare a Temporary Danger Area to avoid closing a lane of entry or a VFR route around controlled airspace, and may seek input and advice from the duty ORM.

2.4.2.4.3 ORM judgement

Use your best judgement, or seek advice from OAR, when the varying nature of fire scene locations and their interaction with itinerant aircraft, aerodromes and airspace presents situations that may not clearly fit the previously listed scenarios.

2.4.2.5 NOTAM template

Example of a site-specific Fire NOTAM template:

DUTY OPERATIONS DIRECTOR
MELBOURNE CENTRE
FAX: 03 9235 2744 TELEPHONE: 03 9235 7420 OR 9235 7402

BRISBANE CENTRE
FAX: 07 3866 3257 TELEPHONE: 07 3866 3421

WE WILL TELEPHONE YOU SHORTLY TO DISCUSS THE FOLLOWING PROPOSED NOTAM:

Location:	A)
Commencement Date/Time of activity: *(UTC)*	B)
Cessation Date/Time of activity: *(UTC)*	C)

Activity:

E) INTENSE AVIATION ACTIVITY ASSW FIREFIGHTING OPS WI _____ NM RAD OF _____ (BRG _____ DEG MAG _____ NM FM _____)
ACFT NOT COORDINATED THROUGH STATE FIRE FIGHTING AUTHORITY ARE REQ TO REMAIN CLEAR.
FIREGROUND FREQ _____ MHZ.

Note: include a bearing and distance from a major location on aeronautical charts, if the fireground is not a major feature already depicted.

Example:

E) INTENSE AVIATION ACTIVITY ASSW FIREFIGHTING OPS WI 10NM RAD OF SKIPTON (BRG 280 DEG MAG 18NM FM YARROWEE AIR.
ACFT NOT COORDINATED THROUGH THE VICTORIAN STATE AIR DESK TEL 1300 134144 ARE REQ TO REMAIN CLEAR.
FIREGROUND FREQ 132.55MHZ.

Lower limit of area affected:	F) SFC
Upper limit of area affected: *(specify in Feet AGL or AMSL)*	G)

Originator:	
Address:	
Telephone:	
Fax:	

2.5 Records management

2.5.1 Information register

2.5.1.1 New information register

The duty Supervisor/SM/OCA holder on a daily basis is responsible for the New Information Register:

a) management (e.g. determining operational relevance);
b) maintenance; and
c) currency.

2.5.1.2 Records

Retain completed signature pages for 30 days with other operational records.

2.6 Handover/takeover and Unit opening/closing

2.6.1 Responsibilities

2.6.1.1 Staff responsibility

Ensure that your licence is current and your medical is valid.

Prior to commencing operational duty for the first time in a shift, check:

a) your recency;
b) the New Information Register and initial each operational item; and
c) pertinent NOTAM and weather information.

Note 1: *The New Information Register is a record of new and/or amended operational information.*

Note 2: *Signing a handover/takeover sheet that includes or refers to new information also satisfies point b) above.*

2.6.1.2 Supervisor responsibility

The Shift Manager/Supervisor/OCA holder must remain vigilant to ensure controllers follow the required handover/takeover procedures, and may veto a handover/takeover after considering:

a) traffic and workload complexity;
b) group staffing logistics; and
c) the potential for distraction.

2.6.1.3 Checklist

A handover/takeover checklist must be:

a) displayed at the console; and
b) used to ensure complete transfer of relevant information.

2.6.1.4 Items in the checklist

Include the following items in handover/takeover checklists as the minimum information to be considered in the changeover of responsibility:

Handover/takeover checklist	
R	Runways (if applicable)
A	Airspace and airspace releases
W	Present and forecast weather
F	Facilities/frequencies/equipment
N	Navaids and NOTAM
T	Traffic and separation
O	Outstanding instructions/matters

2.6.1.5 Refer to local instructions

Where used, refer to LIs for:

a) any additional requirements for handover/takeover checklists;
b) the handover/takeover sheet used by the unit;
c) the location where handover/takeover items may be reviewed away from the workstation; and
d) items to be included in the log, where a log system is used.

2.6.1.5.1 Repeat outstanding actions

If not last on a group specific checklist, repeat all outstanding actions (e.g. coordination, restrictions/requirements for separation).

2.6.1.6 Takeover assistance

After handing over, you must remain available to assist until the accepting controller indicates that assistance is not required.

2.6.1.7 Recording of handover/takeover

Record handover/takeovers for a position via voice, where the facility is available, or by journal entry.

2.6.1.7.1 Information to be recorded

Include:

a) the name of staff taking over responsibility for a position, or responsibility for a unit on opening of a non-continuous unit;
b) the position being taken over and the time of transfer of responsibility unless there is other means of identification; and
c) the information relayed when a voice recorded entry is available.

2.6.1.7.2 Supervisor

Where a journal entry is used to record handover/takeovers for SM, ORM or SS roles, both parties must sign the Handover Sheet Checklist to confirm the contents of the handover.

2.6.2 Concentrating/deconcentrating Eurocat operational workstations

2.6.2.1 Concentrating/deconcentrating workstations

When concentrating one Eurocat workstation to another:

Handing over ATSO	Accepting ATSO
Seek prior approval from Supervisor before commencing concentration/deconcentration of workstation(s).	
	Call Handing over ATSO on cold line from Handover mission.
VCS: 1) Select new Mission; 2) LOAD selected Mission; and 3) Check roles listed are correct.	VCS: 1) Select new Mission; 2) LOAD selected Mission; and 3) Check roles listed are correct.
	Set-up the display to the extent possible.
	Initiate takeover of responsibility.
Maintain responsibility while briefing via intercom.	
Request the Supervisor/ACO/TCO transfer the relevant position to the accepting ATSO.	Adjust displays to accommodate the new position prior to assuming responsibility.
Complete all other concentrating/ deconcentrating actions.	Complete all other concentrating/ deconcentrating actions
	VCS: 1) ACTIVATE loaded Mission; 2) Check correct Mission active; and 3) Use the phrase 'ACCEPT HANDOVER' to advise the Handing over ATSO of success mission activation.
	Assume responsibility for the position.
VCS: 1) ACTIVATE loaded Mission; and 2) Check correct Mission active.	

Note 1: *Use of cold lines permits simultaneous concentration/deconcentration of workstations within a group.*

Note 2: *If two or more roles are activated simultaneously and a hotline call is received from a defence unit via SELCAL, the call will be established with both VCS workstations and two way communications will be established between the local ATSOs and the defence operator. However the local ATSOs will be unable to communicate with one another via the hotline.*

Note 3: *Two roles will be activated simultaneously for a short period of time during any concentration/deconcentration of workstations.*

2.6.2.2 Closing a VCS workstation

When closing a workstation using the procedure above:

1) LOAD and ACTIVATE the relevant 'HANDOVER Mission'; and
2) Select RESET VOLUME to restore the default volume settings for the workstation.

2.6.2.3 DEFAULT workstation unavailable

If the DEFAULT workstation is temporarily unavailable, the Supervisor/ACO/TCO must check the TMCS for unmonitored frequencies immediately after the Handing over and Accepting ATSOs have activated their respective missions.

2.6.2.3.1 Unmonitored frequencies

If the TMCS lists any unmonitored frequencies advise the relevant ATSO to load and activate the correct mission.

Note: *If the DEFAULT workstation is unavailable the TMCS is the only location that indicates unmonitored frequencies.*

2.6.3 Eurocat/INTAS consoles

2.6.3.1 Audio system check

Check the operation of the console audio/speaker system when accepting or opening a position by using the Aural Alerts Volume Control in the set up window (Eurocat) or VCCS (INTAS).

2.6.3.2 Audio system failure

Immediately report console audio system faults to the SM/SS. If possible, vacate the console until the fault is fixed.

2.6.4 Console configuration

2.6.4.1 Executive or Planner function in Eurocat

Address the following during the assumption or handover/takeover of operational duty of an Executive or Planner function in Eurocat:

Handover item	Handover condition	Handover action
System Status Indication	Normal	Confirm Status **or** draw attention to differences
Position Status Indication	Normal	Confirm Status **or** draw attention to differences
Position Name	Discrete	Verify
Position Status	Ops	Verify airspace responsibility
Main Window	Centre/Range default as defined in LIs	Return Centre/Range to default **or** draw attention to differences
Second Window	Placement/Centre/Range default as defined in LIs	Return Placement/Centre/Range to default **or** draw attention to differences
Display Levels	Filters default as defined in LIs	Draw attention to Level Filter selections if different to default
SSR Code Filters	Filters default as defined in LIs	Draw attention to SSR Code Filter selections if different to default
Main Window Rings	No default	
Second Window Rings	No default	
Scale Markers	On and visible in the main window for all situation displays	Verify On
SSR All Quick Look All	Off	Verify Off
FPASD	On in ENR, Off in TMA (subject to LIs)	Return setting to Default
Label	Default as defined in LIs	Return settings to Default
Set Up	No default normally multi-radar	Draw attention to other than multi-radar situation
System Maps	Default as defined in LIs	Return to default **or** draw attention to differences
Maps - Global/Local	No default	Draw attention to reason and drawing accuracy
Info - STCA - DAIW - MSAW - AHO	Default as defined in LIs	Return to default Status for each **or** draw attention to differences

Handover item	Handover condition	Handover action
Info - MIL - RAD - AGDL	No default	Draw attention to Status
Info - RAM - CLAM - FPCF	Default as defined in LIs	Return to default Status for each **or** draw attention to differences
SSTP	Default as defined in LIs	Return to default
CQ	No default	If not '0', discuss outstanding items
Tag List	No default	Draw attention to Status
AIF Queue	No default	If not '0', discuss outstanding items
Voice switch	Default as defined in LIs	Return to default **or** draw attention to differences

2.6.4.1.1 Exception

List group specific default settings in LIs.

2.6.5 Non-continuous towers - opening and extension

2.6.5.1 Opening of non-continuous towers

Immediately prior to the opening of an adjoining or underlying tower, broadcast: "ALL STATIONS (location) AREA, (location) TWR AND [CLASS (C/D/E)] [AIRSPACE] [CTR] [BELOW (level)] ACTIVATES AT (time). ALL STATIONS (location)".

2.6.5.2 Hazard alerting

Commence hazard alert broadcasts when:

a) the opening of an adjoining or underlying tower is delayed; or
b) tower services are extended and a NOTAM is not issued.

Refer MATS Chapter 9.1 Provision of FIS.

2.7 Equipment testing and monitoring

2.7.1 Radiation of test signals

2.7.1.1 Authorisation limitations

The duty TMA/TCU supervisor, or at a non-surveillance tower the OCA holder may authorise the radiation of test signals from a localiser, glide path or DME (frequency paired with localiser) provided:

a) notification is provided in accordance with MATS;
b) any NOTAM affecting the equipment under test is accurate and current;
c) MATS procedures are followed;
d) when a localiser radiates test transmissions:
   i) the localiser identification is suppressed;
   ii) the associated glide path is switched off;
   iii) any associated DME is switched off or its identification suppressed; and
   iv) for a runway in operational use for arrivals, meteorological conditions permit continuous visual descent below the ILS lowest holding altitude or, if none published, the altitude prescribed for the initial approach fix, and by night the VASIS/PAPI must be operational;
e) when a glide path radiates test transmissions:
   i) the associated localiser is switched off; and
   ii) any associated DME is switched off or its identification suppressed; and
f) when an ILS associated DME radiates test transmissions, the associated ILS (localiser and glide path) is switched off or its identification suppressed.

2.7.1.2 Prior to test radiation

Immediately prior to test radiation, technical staff must contact the duty TMA/TCU supervisor, or at a non-surveillance tower, the OCA holder to obtain approval for the test and advise its anticipated duration.

2.7.1.2.1 Facility is unserviceable

Consider the facility unserviceable until technical staff advise completion of the test.

2.7.2 ILS flight check

2.7.2.1 Continuous visual descent below the ILS

Where an ILS flight check is being conducted on a runway in operational use for arrivals, meteorological conditions must permit continuous visual descent below ILS lowest holding altitude or, if none published, the altitude prescribed for the initial approach fix. By night the VASIS/PAPI must also be operational.

2.7.3 Navaids

2.7.3.1 Condition of navaid - NOTAM

Include in NOTAM advising navaid testing or serviceability:

a) location;
b) duration of tests or non-availability;
c) (identification of aid) and frequency;
d) the words NIL IDENT or IDENT XP when a possibility of the aid radiating exists;
e) the words NOT AVBL (reason);
f) the words DO NOT USE; FALSE INDICATIONS POSSIBLE where a possibility of the aid radiating exists; and
g) other relevant information.

2.7.3.2 Tower monitoring of navaids

The Control Tower associated with a Eurocat TMA is responsible for the continuous monitoring of the status of navaids required for holding, instrument approaches and departures.

2.7.3.2.1 Exception

When the Control Tower associated with a Eurocat TMA is closed, the Service Desk Airways is responsible for monitoring their status.

2.7.4 Tower clocks

2.7.4.1 Time

Perform a daily check of wall and console clocks at non-INTAS towers other than Sydney. Check clocks against the Eurocat console time where available, or by checking with an adjoining Eurocat unit. Submit a fault report for variations in excess of 30 seconds. Specify in LIs when to perform the checks and the unit to be contacted where applicable.

Note: *Sydney wall and console clocks are permanently synchronised to Eurocat or the TAR GPS time source.*

2.7.5 Eurocat equipment checks

2.7.5.1 Frequencies and UFB

Complete backup equipment checks weekly when directed by Shift Managers and record the completed equipment checks in the AOJ.

2.7.5.1.1 Equipment to be checked

Equipment	Test to be undertaken
Standby	Operate for at least one hour
Tertiary	Operate for at least one hour, unless there are operational issues
AGA VHF	Check when mains equipment is selected. (Audio feedback occurs when standby/tertiary radios are selected)
UFB Display	Check and compare aircraft location and strips with the Eurocat display

2.7.6 Tower equipment checks

2.7.6.1 Serviceability checks

Check tower equipment serviceability as follows and record completed equipment checks in the AOJ:

Equipment	Non-continuous towers	Continuous towers
VHF main transmitters and receivers	Prior to commencing daily operations and prior to major traffic peaks if the facility has not been used for two hours.	Prior to major traffic peaks if the facility has not been used for two hours.
VHF standby and tertiary transmitters and receivers (where provided)	Prior to commencing daily operations, and once per week selected continuously for a minimum of one hour.	Once per week selected continuously for a minimum of one hour.
VHF portable or mobile radio (where provided)	Weekly	Weekly
Audio system (where A and B audio systems are provided)	Once per day Not applicable INTAS	Once per day Not applicable INTAS
Bypass (where provided)	Weekly	Weekly
Training Override Facility	Prior to commencing training or familiarisation.	Prior to commencing training or familiarisation.
Signal Lamp	Prior to commencing the day's operations.	Once per day

Note: *For Eurocat and INTAS consoles see 2.6.3.1 Audio system check.*

2.7.6.1.1 Local instructions

Specify any additional test requirements including when periodic equipment checks are to be conducted in LIs.

3 Meteorology

3.1 Meteorological information to pilots

3.1.1 CATIS/DATIS

3.1.1.1 Standard format

Format	Information
(APCH)	Type of Approach
RWY	Runway(s) in use
SFC COND	Surface conditions
(OPR INFO)	Operation information
WIND	Surface wind direction and speed. When the direction is quoted with two values, the input requirement is: **Dir1-Dir2.** When the wind speed is quoted with two values, the input requirement is: **Speed1-Speed2.** Example: 060-140/8-20 input will be broadcast as WIND VARYING BETWEEN 060 AND 140 DEGREES, MINIMUM 8 KT, MAXIMUM 20 KT. ***Note:*** *Winds can be imported from the AWS and METAR and will present in a more appropriate format (rounded up or down to five degrees).*
VIS	Visibility/Runway Visual Range/Runway Visibility. DATIS: when visibility is to be reported as GREATER THAN ONE ZERO KILOMETRES, use only the canned data provided via the Vis field. When the visibility entered into CATIS is 1500 m or less, it will be automatically broadcast as RUNWAY VISUAL RANGE.... When the visibility is less than 1500 m but has not been assessed by an RVR measurement: a) enter the correctly prefixed visibility into the OPR INFO field; and b) leave the VIS field blank.
(WX)	Present weather
CLOUD	
TEMP	
DP	Dewpoint
QNH	
(SIG WX)	Significant meteorological phenomena
Note: *Where the field is enclosed in brackets, the field name will not be voice broadcast on CATIS.*	

3.1.1.1.1 Actual QNH not available

When the actual QNH is not available, leave the QNH field blank and insert ACTUAL QNH NOT AVAILABLE AREODROME FORECAST QNH (value) as the first item in the SIG WX field.

4 Abnormal operations

4.1 Aircraft emergencies

4.1.1 Bomb and extortion threats

4.1.1.1 Bomb and extortion threats

Bomb and extortion threat procedures are contained in LIs where required. The SM must ensure that a copy of the Bomb/Extortion Threat Report Form (C-FORMS0001) is held in case AvNet is not available.

4.1.2 PAN due medical emergency

4.1.2.1 Response

When a pilot declares 'PAN PAN, MEDICAL PRIORITY REQUIRED', enter PANM in the LABEL_DATA field.

4.1.3 Request for medical assistance

4.1.3.1 Medical assistance

When a pilot requests ATS to organise medical assistance to meet the aircraft:

a) Obtain all details as per the Medical Emergency Details (ATS-FORM-0048) form;
b) Advise the SM or ORM/SS (as appropriate);
c) Manned tower; ORM/SS or SY/PH TCU SM (as appropriate) contact tower to request ambulance and/or ARFFS first aid response; and
d) Unmanned aerodrome; ORM/SS contact 000 and request ambulance and advise the ARO for aerodrome.

Note: *ARFFS are only first aid qualified. They are not trained paramedics.*

4.2 Reporting

4.2.1 Harmful interference

4.2.1.1 Definition

Interference is considered harmful when it:

a) endangers the functioning of a radio-navigation service or other safety services; or
b) seriously degrades or repeatedly interrupts a radio communication service.

4.2.1.2 Responsibility

On becoming aware of harmful interference:

a) if possible, identify the specific type or location of the interference;
b) record all available information regarding the type, source and severity of the interference;
c) report the occurrence to the Service Desk Airways (ext 24777) and obtain a fault report number;
d) record all other mandatory information as per VHF form (including fault report number) and submit. The form will be automatically distributed to relevant recipients including the RFI Coordinator; and
e) when interference appears to be malicious:
   i) complete notification (see NAAM Chapter 1.6); and
   ii) advise the Office of Transport Security.

4.2.1.3 VHF and HF forms

Use the VHF Radio Interference Report Form (ATS-FORM-0017) or HF Radio Interference Report Form (ATS-FORM-0016) to report interference.

Note: *These forms are forwarded automatically to all relevant recipients.*

4.2.2 GNSS outages/interference

4.2.2.1 Report GNSS variations

Notify the SM or ORM/SS when you become aware of:

a) un-forecast GNSS outage; or
b) interference to GNSS signals.

The relevant Supervisor must advise the NCC as soon as possible.

Note: *Early reporting may assist in locating the source of the interference.*

4.2.3 Unauthorised laser illumination event

4.2.3.1 Pilot report

On receipt of a pilot report of an unauthorised laser illumination event:

a) commence hazard alerting procedures and continue until such time as a warning is transmitted on ATIS;
b) transmit the ATIS warning for one hour or continue hazard alerting as per MATS Chapter 9.1 Provision of FIS; and
c) complete notification (see NAAM 1.6).

4.2.3.1.1 Required information

Where possible, include in the notification the level of the aircraft and any specific information about the source of the laser that might assist law enforcement agencies to respond.

4.2.4 RVSM and RNP

4.2.4.1 RVSM height deviation

Report height deviations from CFL of more than 300 FT by RVSM approved aircraft operating within the RVSM flight level band using CIRRIS.

4.2.4.2 RNP navigation errors

Report navigation errors when:

a) a lateral deviation of 15 NM or more from cleared track is observed;
b) longitudinal navigation errors of three minutes or more between the aircraft's estimated time of arrival at a reporting point and its actual time of arrival; or
c) a navigation system fails.

4.2.4.2.1 Procedure

When a reportable navigation error occurs:

a) immediately advise the pilot; and
b) provide the shift supervisor with the necessary information to complete the occurrence report.

4.2.5 Animal strike reporting aerodromes

4.2.5.1 ATC reporting requirements

If you become aware of an animal strike, advise the tower OCA holder or your Supervisor who must:

a) advise aerodrome ground staff/operator and provide any additional details relating to the incident such as registration and type of aircraft; or
b) submit an ATS Occurrence if unable to contact the aerodrome operator and include this information in the report.

Note: *The aerodrome operator will, where practical, report incidents occurring within their jurisdiction to ATSB.*

4.2.6 Remotely Piloted Aircraft Systems (RPAS) operations and incidents

4.2.6.1 Pilot reports or observations from the tower

When an RPAS operation is suspected as unauthorised or conducted in a way that endangers aviation safety:

a) commence alerting procedures in accordance with MATS Chapter 9.1;
b) consider inclusion of a warning on the ATIS;
c) record all available information;
d) notify the relevant Supervisor; and
e) complete notification (see NAAM 1.6).

4.2.6.1.1 Immediate safety concern

When an immediate concern for aviation safety exists:

a) report the occurrence to the Police as soon as practicable; and
b) notify the occurrence to the NCC and advise the NCC if the Police have been notified.

Note: *Early reporting may assist Police in locating and stopping the unauthorised activity.*

4.3 Providing an Air Traffic Service from a temporary tower

4.3.1 Approval SMS

4.3.1.1 Apply the Safety Management System

Apply the Safety Management System before operating from a temporary facility.

ATC management are responsible for assessing against CASR Part 172 and notifying CASA for the dispensation/approval to operate from such a facility.

Note: *ATS from a temporary tower facility is a Disaster Recovery and Business Continuity decision.*

4.3.1.2 Determination of need

The Executive General Manager ANS in consultation with the CATC and the relevant ANS Operations Manager will determine the need to provide a tower service. Only commence the service with the approval of one of these managers.

Note: *If the control tower building has to be evacuated and/or is no longer available, the ability to provide a tower service from an alternative site is dependent upon the agreement to use, and the availability of, a suitable building/facility. Refer LoA_740.*

5 Special operations

5.1 Special operations

5.1.1 Model aircraft etc - ATC actions

5.1.1.1 Operational considerations

In addition to the requirements of CASR Part 101, consider placing the following requirements on operators:

a) having the operator contact the tower at least 15 minutes before the intended operation. (Written notification should be the normal initial request.);
b) defining operating limitations and duration of event (e.g. within the runway strip of RWY nn not above 400 FT AGL, east of the tower, for no longer than nn minutes);
c) ensuring you have a contact phone number in case you need to cease the operation before the agreed time;
d) ensuring there is a responsible person in attendance; and
e) having the operator ring on completion.

5.1.1.1.1 Overlying airspace

Where the operation will affect overlying airspace, coordinate the request for airspace use with the associated TCU sector prior to approval.

5.1.2 Joyflight/adventure flights

5.1.2.1 Intended joyflight/adventure flights in ex-military aircraft

If contacted by an operator intending to commence joyflight/adventure flights in ex-military aircraft, advise the operator to discuss the proposed operations with the Department of Infrastructure and Regional Development.

5.1.2.1.1 For further information

Contact Environment & Noise (Operational Standards) if you require further information.

5.1.3 Classified flights and covert operations

5.1.3.1 Communication protocols for classified flights and covert operations

Do not divulge information other than that which is essential for the provision of Air Traffic Services when handling classified flights and covert operations.

5.1.3.2 FDR creation for operationally sensitive flights

Create FDRs as follows to ensure Webtrak and FIB do not transmit details on sensitive or covert flights:

a) enter the SSR code into the ASSR as per the relevant LoA; and
b) include VH in the registration e.g. VHABC.

5.1.3.3 Abbreviation for covert operations

Insert CVT into the FDR of aircraft conducting covert operations.

5.1.4 Coastal surveillance flights

5.1.4.1 Departure messages

Provide departure advice about Coastwatch or customs aircraft to the FDC.

5.1.4.2 Additional information

Determine whether external agencies that adjoin your airspace require flight details for aircraft that may operate close to or enter their airspace.

5.1.4.2.1 Coordination prefix

Advise the FDC by prefixing the coordinated items with "FOR ADDITIONAL DISTRIBUTION TO (unit)".

5.1.5 NOCOM flights

5.1.5.1 NOCOM HMI indication

Set the FDR SARTIMER to the NOCOM cancellation time and place NC\(frequency) in the LABEL_DATA field (e.g. NC\123.5).

5.2 Formation flights

5.2.1 FDR/FDE manipulation

5.2.1.1 Multiple FDRs

When two or more aircraft with separate FDR/FDEs join up and continue as a single formation, use the FDR/FDE of the formation leader and inhibit (Eurocat) or hide (INTAS) the other FDR/FDE(s).

5.2.1.2 Dissimilar types

If the combined formation includes dissimilar types, modify the TYP of the formation leader's FDR/FDE to the aircraft type of the lower performance element of the formation.

5.3 Parachuting

5.3.1 Eurocat

5.3.1.1 FDR manipulation

Where practical, use a filed flight plan or stereo plan for PJE operations.

5.3.1.2 Descent/drop clearance

After issuing a descent/drop clearance (or a traffic statement to PJE in Class E airspace) for aircraft:

a) on descent to destination, amend the CFL to a block level (e.g. FL120 to 000);
b) on descent to an intermediate level:
   i) amend the CFL to the block levels to incorporate the aircraft's descent; and
   ii) enter 'DROP' into the LABEL_DATA field; or
c) not on descent:
   i) enter 'DROP' into the LABEL_DATA field; or when unable to do so
   ii) amend the CFL to a block level, where the lower level is the base of CTA, until the parachutists are clear of controlled airspace.

5.3.1.3 Report on descent

When the aircraft reports on descent:

a) amend the CFL to 000 (or advised level); and
b) remove 'DROP' from the LABEL_DATA field (if required).

5.4 Airwork flights

5.4.1 Eurocat

5.4.1.1 En route FDR manipulation

Manipulate an airwork FDR as follows:

1) Remove the relevant airwork delay from the FDR;
2) HLD the FDR in the airwork area during the airwork period; and
3) On completion of airwork, remove the FDR from HLD.

5.5 RPAS

5.5.1 Approving RPAS operations

You may give permission, approve operations or issue a clearance to an RPAS operator when:

a) CASA has issued an Instrument of approval for the operation;
b) the operation has been assessed by the ATC unit with jurisdiction for the airspace in which the operation is to occur (with assistance from Operational Standards when necessary), or is subject to a Letter of Agreement (LoA) between Airservices and the RPAS Operator; and
c) the CASA Instrument matches the conditions requested by the operator.

Note: *ATC approval is not required for RPAS operations that are:*

a) in CTA;
b) below 400 FT AGL; and
c) outside 3 NM from the movement area of a towered aerodrome or its approach/departure paths.

5.5.1.1 No instrument, or other requests

When the CASA Instrument does not match, or the RPAS operator has other requests, refer the operator to the CASA RPAS Office.

5.5.1.2 ADF RPAS

ADF RPAS applications will be directed to Airservices via the UAS mailbox. Operational Standards, or the ATC unit with jurisdiction for the airspace in which the operation is to occur, must risk assess these applications in the same manner as civil RPAS applications. As CASA approval via an instrument is not required, the risk assessment (RA) must contain any conditions or constraints placed on the operation.

Note: *Unmanned aircraft operated by the ADF are defined as 'State aircraft' and do not required CASA permission to operate.*

5.5.2 RPAS approval process

Process applications to operate an RPAS within 3 NM of a controlled aerodrome as follows:

1) After receipt from CASA RPAS/PAC assignment, Operational Change Coordinators will forward the application and supporting documentation to the relevant Tower and/or TCU;

   Note 1: *Applications must be completed on CASA form 101-09 and must contain all supporting evidence either within the form or included as attachments.*

   Note 2: *A directory tree for RPAS application processing has been established on the AS_TOWER drive (AS_TOWER\RPAS). While use of the directory is not mandatory, it enables review and monitoring of the application process and will assist in processing where additional assistance may be required from Operational Standards.*

2) The responsible ATC unit must:
   i) assess the RPAS operation and document any conditions or constraints; and
   ii) advise CASA of conditions or constraints required for the RPAS operation, including advice of any operation that cannot be facilitated.

   Note: *Guidance on application processing can be found on the ATS National Reference Library under the 'Special Operations/RPAS' tab. See RPAS in ATM Operations*

3) The responsible ATC unit must not allow the RPAS operation to proceed until CASA has forwarded a signed Instrument with the matching application reference number to the respective Tower/TCU and the RPAS operator.

5.5.3 CASA communication

Use the RPAS/PAC assignment mailbox to correspond with CASA. Include the RPAS application number (e.g. RPAS 2019-2145) in the subject line of all correspondence.

This page is intentionally blank

6 Coordination and communication

6.1 MATS coordination via Eurocat

6.1.1 Variations to MATS coordination

6.1.1.1 Modify MATS coordination

Use the procedures in this section, and where specified in LIs or LoA, to modify MATS coordination.

Note: *System information used by Eurocat allows MATS coordination to be reduced and simplified.*

6.1.2 Non-coordination route requirements

6.1.2.1 Non-coordination route specifications

Apply non-coordination to aircraft on routes or route segments that:

a) are defined as a one-way route or route segment;
b) transit lateral sector boundaries contained within the one FDRG; and
c) are specified in LIs or LoA.

6.1.2.2 Changing assigned level - controlling sector

Where non-coordination is applied, you may change an assigned level until the hand-off is proposed.

Note: *Non-coordination does not apply across vertically adjoining sector boundaries.*

See also 6.2 Coordination confirmation.

6.1.2.3 Separation planning - receiving sector

Do not separate using the displayed CFL of a non-jurisdiction aircraft unless:

a) the aircraft is handing off; or
b) you have coordinated the assigned level to the transferring controller.

6.1.3 Limited coordination route requirements

6.1.3.1 Limited coordination specifications

Apply limited coordination to aircraft on routes or route segments that:

a) are defined as a one-way route or route segment;
b) transit the FDRG boundary;
c) have a coordination point published on the FDRG boundary;
d) are contained within ATS surveillance system coverage; and
e) are specified in LIs or LoA.

Note: *Coordination is provided by the AIDC EST message.*

6.1.3.1.1 Exception

Departures from Sydney TCU that enter the Brisbane FDRG are excluded from these requirements.

6.1.3.2 Voice coordination

Where limited coordination applies, voice coordinate:

a) when you change an assigned level after the EST message has been sent;
b) when an aircraft is assigned a level other than the standard assignable level;
c) prior to changing the level coordinated by the receiving controller before the EST message was sent; or
d) prior to hand-off if the XFL in the electronic strip does not equal the CFL.

See also 6.2 Coordination confirmation.

6.1.4 Conditional coordination

6.1.4.1 Conditional coordination specifications

Apply conditional coordination to aircraft when the area defined for its use is:

a) contained within one FDRG;
b) contained within ATS surveillance system coverage; and
c) specified in LIs or LoA.

6.1.4.1.1 Conditional coordination requirements

When conditional coordination applies, only one of the affected sectors is required to provide heads up coordination.

See also 6.2 Coordination confirmation.

6.1.5 Voiceless coordination

6.1.5.1 Voiceless coordination specifications

Apply voiceless coordination procedures:

a) provided that the:
   i) posting conditions of announced position symbols and the PCLs are correct;
   ii) FDR reflects the current clearance/pilot intentions; and
   iii) ASD range complies with the requirements in 6.1.5.1.1 Airspace display requirements for laterally adjoining sectors;
b) to or from Class G airspace; and
c) in other classes of airspace where specified in LIs or LoA.

6.1.5.1.1 Airspace display requirements for laterally adjoining sectors

When applying voiceless coordination between laterally adjoining sectors, ensure the ASD range displays:

a) at least 50 NM beyond the sector boundary, when surveillance coverage extends at least 110 NM beyond the sector boundary;
b) at least 110 NM beyond the sector boundary, when specified in LIs or LoA; or
c) sufficient for the provision of ATS in Class G airspace.

6.1.5.1.2 Change parameters - laterally adjoining sectors

Unless specified in LIs or LoA, voice coordinate prior to issuing changes to aircraft within the applicable parameter specified in the following table:

	Parameter from sector boundary	Conditions
Controlled airspace	50 NM	a) Identified by 15 minutes from the sector boundary; and b) remain identified until crossing the sector boundary.
	15 minutes	
Class G airspace	20 NM	a) Identified; and b) same FDRG.
	10 NM	a) Identified; b) same FDRG; and c) to or from a TCU.
	5 minutes	a) Not identified; or b) crossing the FDRG boundary.

6.1.5.1.3 Voice coordination requirements

Where voiceless coordination applies, voice coordinate by the relevant voiceless coordination change parameter when an aircraft's block level clearance will not be wholly contained within the receiving sector's airspace.

See 6.2 Coordination confirmation.

6.1.5.2 Surveillance Information Service (SIS)

Apply voiceless coordination to aircraft provided a SIS. Approve an ongoing service by accepting jurisdiction.

6.1.5.3 Voiceless coordination between vertically adjoining sectors

6.1.5.3.1 Heads-up coordination not required

In all classes of airspace, heads-up coordination is not required when:

a) aircraft are transferred between vertically adjoining sectors; and
b) standard assignable levels are assigned.

See also 6.2 Coordination confirmation.

6.1.5.3.2 Standard assignable levels en route

For aircraft on	Assign
Climb	a) The vertical boundary when the boundary is an IFR level; b) 500 FT below the vertical boundary when the boundary is a VFR level; or c) As specified in LIs or LoA.
Descent	a) 1000 FT above the vertical boundary when the boundary is an IFR level; b) 500 FT above the vertical boundary when the boundary is a VFR level; or c) As specified in LIs or LoA.

Note: *For aircraft on climb from Class G airspace, the base of CTA is the standard assignable level.*

6.1.5.3.3 Restrictions

The transfer is with:

a) no vertical restrictions in the expected direction of the aircraft's vertical manoeuvre; and

b) no lateral restrictions within 45 degrees of the nominal forward track.

6.1.5.3.4 Delay at the boundary

Voice coordinate if there will be a delay at the sector boundary.

6.1.6 Coordination between Eurocat and non-Eurocat units

6.1.6.1 Apply MATS coordination

Apply MATS coordination between units unless system messaging is available.

6.2 Coordination confirmation

6.2.1 Voice coordination

6.2.1.1 When to use these procedures

Unless described elsewhere, use the following procedures when voice coordination is required.

6.2.1.2 Heads-up coordination definition

Heads-up coordination is:

a) an indication of the aircraft's position;
b) the aircraft's callsign;
c) the coordinated level if different to the CFL; and
d) the words 'ON CLIMB' or 'ON DESCENT' for aircraft not identified and not maintaining the CFL at the time of the heads-up coordination.

For example:

a) relative to the position of the aircraft expressed as a cardinal point ('SOUTH WEST, QANTAS ONE');
b) the name of the position or waypoint on, or closest to, the boundary ('VIA APOMA, QANTAS ONE');
c) a taxi and/or departure call ('DEPARTURE YBNA, ABC'); and
d) when not identified and on climb to the CFL ('SOUTH WEST, QANTAS ONE ON CLIMB').

6.2.1.3 Heads-up coordination across FDRG boundary

Unless varied by LoA or LIs, heads-up coordination across an FDRG boundary for non-identified aircraft must contain:

a) an FDRG boundary position estimate, or coordination point (COP) estimate if different from the boundary; and
b) the level that has been, or will be, assigned.

6.2.1.4 Read back

When you receive heads-up coordination, read back the:

a) aircraft's callsign; and
b) CFL or coordinated level when the standard assignable level specified in LIs or LoA is not assigned.

6.2.1.5 CFL different to coordinated level

If the CFL differs from the coordinated level, record the coordinated level in the LABEL_DATA field as C(level).

6.2.1.6 Change coordination

Voice coordinate any proposed change once heads-up coordination has been completed.

6.2.1.7 Level required by the receiving controller

Coordinate with the transferring controller when you require an aircraft to enter your sector assigned a specific level.

6.2.1.7.1 Changing the coordinated level

When the receiving controller has coordinated the level to assign to an aircraft, voice coordinate before changing that level.

6.3 En route coordination requirements

6.3.1 Back Coordination

6.3.1.1 Update FDR

Update the FDR when you receive back coordination across the FDRG boundary.

6.3.1.2 Amending back coordination requirements

Specify in LIs or LoA agreements allowing the receiving sector to alter an aircraft's clearance without reference to the transferring sector once the aircraft has contacted the receiving sector.

6.3.1.3 Class G airspace

Voice coordinate any amendment when an aircraft's route is within 7.5 NM of the transferring sector's airspace unless the:

a) transferring controller has transferred jurisdiction of the aircraft to you; and
b) amendments are limited to:
   i) level changes; or
   ii) track changes within 45 degrees of the nominal forward track.

6.3.2 Boundary coordination - Eurocat Class G

6.3.2.1 Boundary coordination within the FDRG

Coordinate aircraft displayed as a flight plan position symbol that may operate within 7.5 NM of the sector boundary, including due to lateral deviations.

6.3.2.1.1 Boundary coordination exception

Coordination is not required when an aircraft without lateral deviations will operate within 7.5 NM of the sector boundary, provided a position symbol is displayed on the ASD and the FDR and position symbol label displays the pilot's intentions.

6.3.3 General coordination principles within a non-surveillance environment

6.3.3.1 Principles

For flight plan position symbol and ADS-C aircraft where the ECSW Alert function is not enabled:

a) record the voice or system coordinated estimate in the strip;
b) monitor the coordinated and current estimates; and
c) coordinate revised estimates when necessary.

6.3.3.2 Consistency of information

Ensure that information contained in aircraft reports is consistent with information coordinated by the transferring sector or unit.

6.4 Using Eurocat for coordination

6.4.1 Cross FDRG boundary EST messages

6.4.1.1 Voice coordination

When possible, wait until an 'A' is displayed in the AIDC indicator position of the strip before performing voice coordination.

Note: *The 'A' is confirmation that the EST message has been accepted by the next unit.*

6.4.2 Coordination Prompt functionality (C Prompt)

6.4.2.1 C Prompt display

Display the C Prompt when:

a) all coordination for an aircraft is complete; or
b) voice coordination is not required for an aircraft.

6.4.2.1.1 AIDC messaging coordination

When using AIDC messaging for coordination, display the C Prompt when:

a) an 'A' is displayed in the AIDC indicator position in the strip;
b) the coordinated level is:
   i) the CFL;
   ii) annotated in the LABEL_DATA field; or
   iii) the standard assignable level as specified in LIs or LoA; and
c) voice coordination is not required.

6.4.2.2 En route removal of C Prompt

Remove the C Prompt after a HMI jurisdiction transfer when:

a) you receive a correct readback to a frequency transfer issued via VHF;
b) a frequency transfer and END SERVICE issued via CPDLC has been completed; or
c) aircraft are operating on HF.

See 6.6.1.2 Frequency indication without HMI jurisdiction transfer.

6.4.3 Recording coordination in Eurocat

6.4.3.1 Coordination prior to jurisdiction

Record coordinated items in the GLOBAL or LOCAL_OPS_INFO fields when coordinating prior to obtaining jurisdiction. You do not need to record the coordinated level if it is the current CFL.

6.4.3.2 Change of details after coordination

Annotate any level or route request received post coordination in the LABEL_DATA field with the prefix 'R' (e.g. R370). If the approved amended clearance cannot be issued immediately after coordination, change the 'R' to 'C' (e.g. C370).

6.4.3.3 Recording a level restriction

Record the coordinated level as 'C(level)' in the LABEL_DATA field when the receiving controller has coordinated the level to assign to an aircraft.

6.4.3.4 Recording multiple coordination - en route

Record each unit with which coordination is required as each item is completed. You do not need to annotate the sector receiving jurisdiction.

6.4.4 Exit Flight Level (XFL)

6.4.4.1 XFL change

You may change an aircraft's XFL to reflect the level to be coordinated if this level will be assigned after the AIDC EST/PAC/CPL message is sent.

Note: *You cannot change the XFL once the EST/PAC/CPL message is sent.*

6.4.4.1.1 Maintaining the coordinated level

Where applicable, ensure the aircraft maintains the coordinated level at the parameter specified in a relevant Letter of Agreement.

6.4.4.2 Manual modification of XFL

When the XFL has been manually changed, enter 'X(level)' in the LABEL_DATA field. Remove this annotation when an 'A' is displayed in the AIDC indicator position of the strip.

6.4.4.3 XFL coordination by voice

Voice coordinate when:

a) a non-identified aircraft will cross the FDRG boundary on climb or descent to the XFL sent in the EST/PAC/CPL message; or
b) an aircraft will cross the FDRG boundary assigned a level different to the level sent in the EST/PAC/CPL message.

6.5 Jurisdiction management

6.5.1 Jurisdiction management requirements

6.5.1.1 Manual assume

Unless specified in LIs or LoA, voice coordinate before assuming an aircraft under the jurisdiction of another controller.

6.5.1.1.1 Non-acceptance of aircraft

Notify the transferring sector if you cannot accept an aircraft.

6.6 Frequency management in Eurocat

6.6.1 Timing and HMI indications

6.6.1.1 Frequency transfer

Transfer aircraft to the accepting sector's frequency:

a) when a hand-off is accepted;
b) at the position report on the sector boundary for a flight plan position symbol; or
c) at a pre-coordinated time or position.

6.6.1.2 Frequency indication without HMI jurisdiction transfer

If you annotate the frequency in the LABEL_DATA field and no HMI jurisdiction transfer occurs, remove the:

a) 'J' for CPDLC aircraft when you receive a WILCO response to a frequency transfer instruction;
b) frequency annotation for VHF aircraft upon receipt of a correct readback; or
c) HF annotation after the aircraft leaves your airspace.

6.7 Coordination between approach (procedural) and en route control (surveillance or procedural)

6.7.1 Principles

6.7.1.1 Standard assignable levels

For aircraft on	Assign
Climb	500 FT below the tower airspace upper limit, or level specified in an LoA
Descent	500 FT above the tower airspace upper limit, or level specified in an LoA

Note: *You do not need to include the standard assignable level when voice coordinating arriving aircraft.*

6.7.1.2 Boundary traffic

Coordinate any aircraft that will operate within 500 FT vertically of the other unit's airspace.

6.7.2 Aircraft entering tower airspace

6.7.2.1 Estimate coordination

Coordinate arriving aircraft that are not part of the sequence at least 10 minutes prior to the lateral boundary and include the:

a) callsign;
b) destination estimate;
c) route or inbound radial/bearing; and
d) level.

6.7.2.2 Vertical restrictions

Transfer aircraft entering tower airspace with no vertical restrictions on descent unless there are aircraft arriving in the same sequence assigned a lower level.

6.7.2.3 Frequency transfer

Transfer aircraft entering tower airspace at least 10 NM prior to the Tower airspace lateral boundary.

6.7.3 Aircraft departing tower airspace

6.7.3.1 Taxi coordination

Coordinate IFR aircraft, and VFR aircraft as required, at or prior to taxi.

Note: *The standard assignable level does not need to be stated in taxi coordination.*

6.7.3.2 Level assignment

When issuing an airways clearance to a departing aircraft, assign the RFL or the standard assignable level, whichever is the lower.

6.7.3.3 NEXT Call

On receipt of the NEXT call, en route must coordinate an assigned level.

Note: *This may be the standard assignable level or a higher level*

6.7.3.4 Vertical restrictions

Transfer aircraft assigned the standard assignable level with no vertical restrictions on climb.

6.7.3.5 Frequency transfer

Transfer departing aircraft to permit unrestricted climb.

6.8 Tower and TCU coordination

6.8.1 Coordination between TCU and Tower - RadTags

6.8.1.1 RadTag aircraft in arrival sequence

Voice coordinate when an arrivals sequence contains a RadTag aircraft.

6.8.1.1.1 INTAS exception

Do not RadTag aircraft arriving to INTAS towers.

6.8.2 ADC to ADC coordination for parallel runway operations

6.8.2.1 Coordination between ADCs

Coordinate any aircraft operating between the runways to the other ADC.

Note: *The airspace between the runway centrelines is shared.*

6.8.3 ADC to SMC coordination for movement area departures and landings

6.8.3.1 ADCs

Coordinate any aircraft landing on, or taking off from, any location on the movement area not under the jurisdiction of the ADC.

6.8.4 Clearances approaching opening/closing time at non-continuous towers

6.8.4.1 Tower

Issue a clearance void time of the closing time of the Class D tower to aircraft requesting airways clearance in situations where the aircraft may depart after the tower closing time.

6.8.4.2 En route and TCU

Issue a clearance void time of the opening time of the Class D tower to aircraft requesting airways clearance in situations where the aircraft may depart after the tower opening time.

6.9 Coordination between FDC and ATC

6.9.1 FDC relay of levels

6.9.1.1 Ensure meaning is relayed

To avoid the incorrect meaning being relayed from FDC to ATC, relay two levels followed by 'B' or 'A' as '(level)(level) [BRAVO (below) or ALPHA (above)]'. For example:

Text	Phraseology
LOLLY/0318F240F310B	LOLLY ZERO THREE ONE EIGHT FLIGHT LEVEL TWO FOUR ZERO FLIGHT LEVEL THREE ONE ZERO BRAVO

6.10 SARTIME management

6.10.1 Processing

6.10.1.1 SARTIME actions

When an aircraft nominates, amends or cancels a SARTIME or associated details with ATC:

1) record the details on the pink SARTIME form;
2) relay the details to SARTIMES;
3) tick the SARTIMES box on the SARTIME form when completed; and
4) file with the daily traffic when all actions are complete.

6.10.1.1.1 Exception

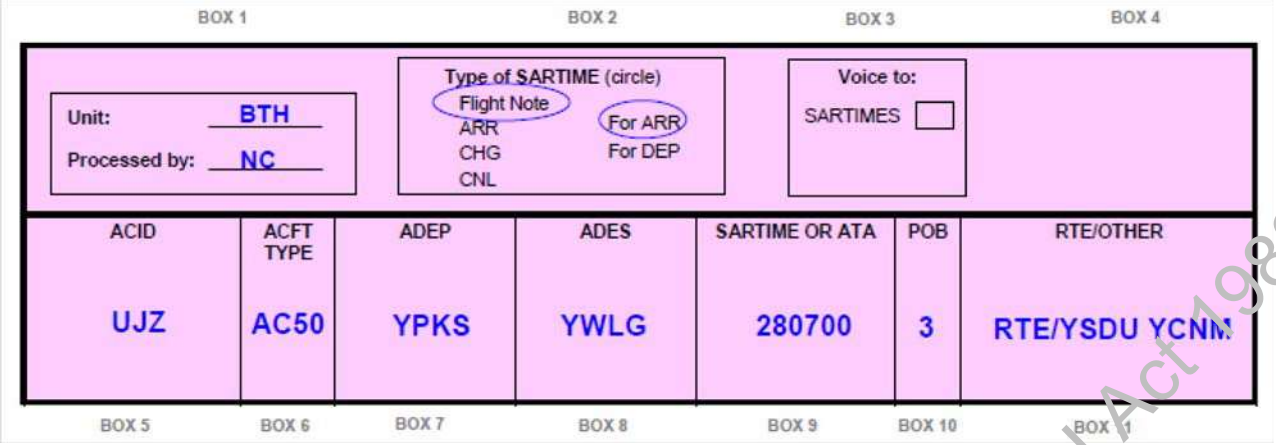
For towers without a direct communication line to SARTIMES, pass the information on a recorded telephone line using the telephone number for SARTIME cancellation listed in AIP ERSA.

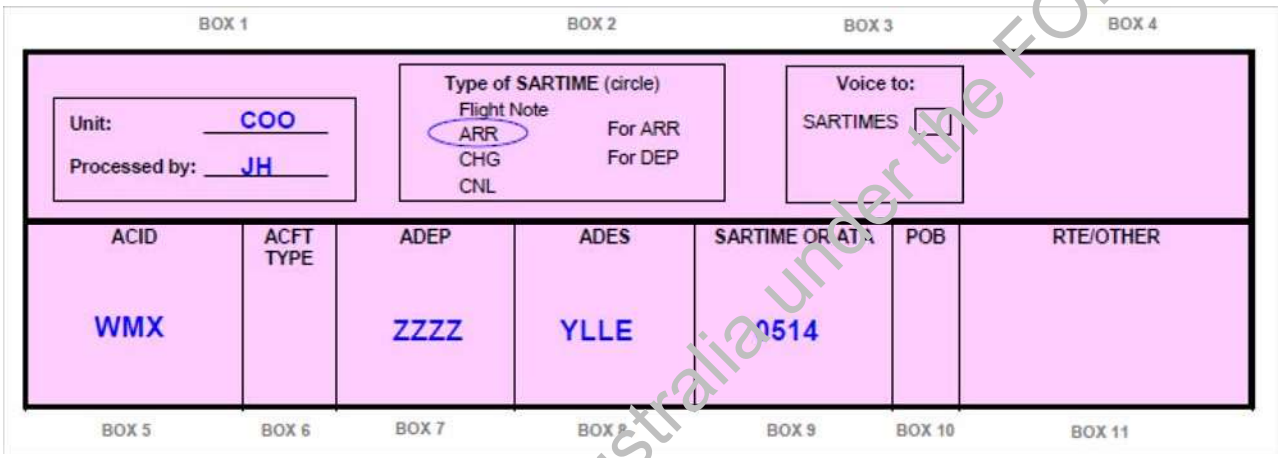
6.10.1.2 SARTIME for departure

When holding a SARTIME for departure at a Eurocat console, activate:

a) the FDR for the departure flight and:
   i) modify the SARTIMER to the nominated SARTIME for departure; and
   ii) enter 'SAR DEP' in the LABEL_DATA field; or
b) a timer to the nominated SARTIME and record the callsign and departure aerodrome.

6.10.1.3 National SARTIME form - example





6.10.1.4 SARTIME form completion

Complete the form as follows:

Box	Requirement
1	a) Enter position name next to 'Sector' e.g. BTH, COO, FDC; and b) Enter initials next to 'Processed by'.
2	a) Circle which type of SARTIME communication is being relayed e.g. Flight Note, ARR, CHG, CNL; and b) Circle 'For ARR' for a 'SARTIME for ARR' or 'For DEP' for a 'SARTIME for DEP'. (If an ARR is being relayed, there is no requirement to circle 'For ARR' or 'For DEP').
3	Tick the box when voice coordination is complete.
4	Vacant.
5	Enter the callsign.
6	Enter the Aircraft type (ICAO designator) - not required for ARR or CNL.
7	Enter the ADEP - not required for ARR.
8	Enter the ADES.
9	Enter the SARTIME (six-figure DTG) or the ATA - not required for CNL.
10	Enter the POB - not required for ARR or CNL
11	Enter any other pertinent details e.g. route.

6.10.1.5 SARTIME phraseology

Use the following phraseologies and processes when relaying SARTIME information:

Actioning officer	Process/phraseology
Controller to SARTIMES	Prefix any SARTIME communication with the nature of the information: a) SARTIME NEW DETAILS ……..; b) SARTIME CANCELLATION ……; and c) SARTIME CHANGE OF DETAILS ……
	For 'SARTIME for ARR' cancellations, do not identify the stage of flight where the cancellation occurs, only identify: a) that a cancellation of SARTIME is required; b) the callsign; c) the location of the SARTIME; and d) the time of cancellation (if not current time). For example: a) SARTIME CANCELLATION... CANCEL SARTIME ABC FOR BANKSTOWN; and b) SARTIME CANCELLATION..... CANCEL SARTIME ABC FOR BANKSTOWN AT 0317.
SARTIMES	1) Check CENSAR for flight details; 2) Validate the details held in CENSAR with those being relayed; and 3) Acknowledge the call using the aircraft's callsign. ***Note:*** *The coordination does not necessarily signify that the aircraft has landed at that location.*

6.11 Third party communications

6.11.1 Domestic operations

6.11.1.1 HF outside controlled airspace

HF positions must advise the primary and secondary frequencies for use.

6.11.1.2 Use lowest useable frequency

To keep interference to a minimum, use the lowest useable frequency that channel loading permits.

6.11.1.3 Class G arrivals

Provide HF frequencies to arriving aircraft in Class G airspace on pilot request.

6.11.2 International crews

6.11.2.1 ATC - VHF to HF transfers

Transfer aircraft to HF with primary and secondary frequencies.

Note: *Two-way communications checks are not required.*

6.11.2.2 HF and SELCAL check requests

Use the following location codes to access HF primary and secondary frequency information via:

a) the AIF function under MET/WARNING; or
b) NAIPS.

Location	HF area
150	International SP6
155	International INO1
160	International SEA3
165	Domestic S
170	Domestic NW
175	Domestic NE
180	Oakland
185	Nadi
190	Auckland
195	Colombo
200	Male
205	Mauritius
210	Johannesburg
230	Moresby

6.11.3 Third party relay of messages

6.11.3.1 Accuracy

Transmit messages word for word between a controller and pilot.

6.11.3.2 Messages directed to aircraft

Relay messages that cannot be passed by the responsible unit via another unit or aircraft. Notify the originator if unable to deliver a message.

6.11.3.3 Reception of incomplete communications

If a complete message cannot be received, pass all available information to the controller for their action.

6.11.3.4 Time frame for communication relay

Complete the relay of communication between controllers and pilots within five minutes of the message being passed to the intermediary station. Advise the originator if you cannot.

6.11.3.5 Pilot cancels SARWATCH with SARTIMES

When SARTIMES cancels an IFR aircraft SARWATCH on behalf of ATC, relay the cancellation to the jurisdiction controller as follows:

Situation	SARTIMES	Controller
Relaying arrival reports	ARRIVAL (callsign, location and time)	(callsign)

6.11.4 Primary guard station responsibility

6.11.4.1 Use of additional measures

Under certain circumstances (e.g. radio conditions, length of flight or distance between aeronautical stations), additional measures to ensure continuity of air-ground communications may be necessary.

6.11.4.2 Flightwatch International

In Australia, only Flightwatch International (FWI) can hold Primary Guard on an aircraft.

Note: *The term Primary Guard only applies where air-ground communication is limited to HF frequencies that are shared and managed by more than one regular station. This occurs in Oceanic Control Area where FWI is the regular network station responsible for communications using SP6, INO1 and SEA3 frequencies.*

6.11.4.3 Sharing of responsibility

The regular stations share responsibility for primary guard. Each station provides primary guard for the portion of flight where they can best handle messages from aircraft.

6.11.4.4 Primary guard station responsibilities

A station holding primary guard for an aircraft is normally responsible for:

a) nomination of suitable primary and secondary frequencies;
b) receipt of all position reports;
c) handling of messages essential to the safe conduct of the flight;
d) provision of flight information to aircraft operating outside controlled airspace but within its FIA;
e) provision of a flight information service to aircraft operating in foreign FIRs/ UIRs when coordination with the responsible ATS unit is not forthcoming; and
f) actions required in case of communications failure.

6.11.4.5 Information for aircraft control areas

Pass information for relay to an aircraft operating inside control areas through the responsible controller. Advise the responsible controller if circumstances require the information to be passed direct to an aircraft.

6.11.4.6 AIREP readback in foreign FIR

Read back Section 1 of the AIREP when accepting a report from an aircraft operating beyond Australian-administered airspace.

6.11.4.7 Assumption of responsibility

Assume primary guard when:

a) an aircraft departs from an aerodrome and establishes communications;
b) primary guard is transferred by another unit;
c) an aircraft establishes communications and requests primary guard be accepted; or
d) an aircraft enters Australian-administered airspace without prior coordination.

Note: *The station normally responsible for the airspace the aircraft is assumed to have entered is the unit responsible for primary guard even when coordination has not been received.*

6.11.4.8 Transfer of primary guard

Transfer primary guard:

a) at an FIR boundary;
b) when you cannot maintain satisfactory communications; or
c) when an aircraft requests a change of primary guard.

6.11.4.8.1 Retaining due to geographical boundaries

Coordinate between the affected parties if communications can be improved by:

a) retaining primary guard beyond your geographical boundaries; or
b) releasing primary guard before the aircraft reaches your boundary.

6.11.4.9 Ceasing primary guard

Responsibility for primary guard ceases when the aircraft:

a) is known to have landed at an aerodrome;
b) is transferred to another station;
c) transfers to an area or aerodrome control frequency; or
d) is operating outside Australian-administered airspace and the regular station is no longer in communication with the aircraft.

6.12 Miscellaneous liaison requirements

6.12.1 HEAD status aircraft

6.12.1.1 Unknown destination aerodrome

Advise the ORM/SS of flights where the destination aerodrome is not known until the departure message is received from the departure aerodrome before the aircraft's arrival in Australia.

Note: *This scenario generally involves flights with Head of State (HEAD) status.*

6.12.1.1.1 ORM/SS responsibilities

When the aircraft will land within their FIR, the ORM/SS must advise the NCC and other nominated aerodromes.

Note: *The NCC will advise Customs, Health and Immigration authorities at the destination aerodrome and nominated alternate aerodromes.*

6.12.2 Infectious diseases or serious illnesses on board

6.12.2.1 Notify the ORM/SS

Notify the ORM/SS immediately if you receive advice that an international flight has infectious diseases or serious illnesses onboard.

6.12.2.1.1 Notify the NCC

The ORM/SS must advise the NCC.

Note: *The NCC will immediately notify the medical authorities at the first point of intended landing.*

6.12.3 Non-scheduled international flights

6.12.3.1 Notify ORM/SS

As soon as possible after information about a non-scheduled inbound international flight is received, coordinate the following information to the ORM/SS:

a) Callsign;
b) Departure aerodrome;
c) ETA;
d) Destination aerodrome; and
e) Information concerning cancellations, diversions or delays.

6.12.3.1.1 Notify the NCC

The ORM/SS must notify the NCC.

Note: *The NCC will advise the local Customs, Health and Immigration authorities at the airport of entry as soon as possible after the information is received.*

6.12.4 Information requests from the RAAF

6.12.4.1 Provide information

Subject to operational priorities and workload, provide operational information when requested to RAAF personnel from:

a) 3 CRU; or
b) HQJOC Air and Space Operations Centre.

Use the following contact phone numbers when a request cannot be dealt with immediately, or when you are uncertain about the validity of the request:

a) 3 CRU: 02 4034 9416; or
b) Air and Space Operations Centre Watchkeeper: 02 6127 0888.

7 ATS message processing

7.1 Message responsibilities

7.1.1 Message distribution responsibilities

7.1.1.1 Temporary addressing requirements

Distribute temporary addressing requirements by TLI or CIR.

7.1.1.2 COMC processing ZQZX and ZPZX messages

Eurocat and COMC receive a copy of messages addressed to ZQZX and ZPZX for both FIRs. With the exception of RQP messages the COMC is responsible for further delivery of these messages (See MATS 7.1).

7.1.1.3 COMC processing of ZP flights

Process all ZP flight plans departing Australian ports unless LIs/LoA give COMC full addressing responsibility.

7.2 Australian Aeronautical Message System (AAMS)

7.2.1 Background

7.2.1.1 Background

The AAMS provides an ATN service using AFTN and ATS Message Handling System (AMHS).

The AAMS has ATN connections to the following Air Navigation Service Providers (ANSPs):

a) KSLC (Salt Lake City);
b) AYPM (Port Moresby);
c) WIII (Jakarta);
d) WSSS (Singapore);
e) FAOR (Johannesburg/OR Tambo);
f) NZCH (Christchurch); and
g) NFFN (Nadi).

7.2.2 Message management

7.2.2.1 Automatic AAMS service messages

The following service messages will be automatically generated by the AAMS:

a) Request for retransmission - initiated when the CSN check on an incoming channel indicates missing messages:

SVC QTA MIS CBA0042 = one message

SVC QTA MIS CBA2242 - 2245 = small number of missed messages (normally up to 100)

SVC LR CBA1152 EXP CBA1339 = large number of missed messages

SVC LR CBA1140 EXP CBA1142 = negative CSN received;

b) Address line corrupt/unknown - initiated when received address line is unknown or garbled:

SVC ADS CBA2049 CORRUPT

SVC ADS 121212 YBBBZRZA

...UNKNOWN YBBBQQQQ;

c) Origin line corrupt/unknown - initiated when received origin line is unknown or garbled:

SVC QTA OGN CBA1046 CORRUPT;

d) Text of message is too long - initiated when received message exceeds 2100 characters in total:

SVC TXT CBA2134 TOO LONG;

e) Expected CH message not received - initiated when expected check message has not been received:

SVC MIS CH 1220 LR XSA125; and

f) Statement of the last message sent by the AAMS and last message received on a particular channel - initiated whenever the connection between the AAMS and any unit has been interrupted, and at change of day 0000 UTC:

SVC LR CBA1045 LS BCA4455.

7.2.2.2 Continuity of CSNs

Action any messages not automatically managed by the AAMS. Check CSNs carefully and, if necessary, exchange LR/LS with the connected unit.

7.2.2.3 Channel identifiers

Identify all domestic and international AFTN channels connected to the AAMS using unique three letter channel identifiers.

7.2.2.4 Channel identifiers and COMC

The National COMC allocates channel identifiers.

7.2.2.5 Channel Sequence Numbers

The AAMS can process either three or four digit CSNs. At 0000 UTC each day the output CSN for each channel is re-set to 0001. A service message is transmitted on each channel stating the last CSN transmitted to, and received from (LR/LS) each unit. The AAMS will accept any incoming CSN as being correct and re-align its counters to accept the next number in sequence. Any missing incoming CSN will cause the generation of an automatic service message (SVC QTA MIS ABC123) or (SVC LR ABC123 EXP ABC119).

7.2.2.6 Interrupted CSNs

The receipt of (LR/LS) service message other than at 0000 UTC daily indicates the connection between the unit and the AAMS has been interrupted, and may require QTA MIS action.

7.2.2.7 Checking of CSNs by receiving units

Check received CSNs and annotate any discrepancy in the AOJ. Take QTA MIS action to obtain copies of missed CSNs.

7.2.2.8 Missing CSN messages

Advise the National COMC when a receiving unit detects that a CSN is missing using a DD priority service message. For example:

a) Brisbane Centre receives BCA 1025 followed by:

BCA 1030

DD YSCBYFYX

121212 YBBBZRZA

SVC QTA MIS BCA1026-1029; and

b) Melbourne Centre receives MCA 887 followed by:

MCA 889

DD YSCBYFYX

121212 YMMMZRZA

SVC QTA MIS MCA888.

7.2.2.9 Message repetition and AAMS

The AAMS will automatically repeat messages provided that the requested message is:

a) properly addressed (YSCBYFYX);
b) in the correct format; and
c) received from the channel where the message was originally transmitted.

7.2.2.10 Re-transmitted messages

The AAMS will determine whether a message has been transmitted under the missing number, and re-transmit the message if required under a new (correct in sequence) CSN.

7.2.2.11 Mutilated messages

Send an SVC message to the message originator identified by the originator indicator in the line of a message when the receiving unit:

a) considers the message to be mutilated; or
b) has reason to believe the mutilation occurred before the message was received by the previous station.

Request a repetition of the message and include brief details of the incorrectly received message. For example:

Melbourne requests Melbourne MET to repeat a message filed at Melbourne.

GG YMMCYMYX

121724 YMMMZRZX

SVC QTA RPT 121717 Y YMMCYMYX RPT TAF

YMML 0214

7.2.2.12 Message responsibility

The unit that receives a SVC QTA message is responsible for taking action on a SVC QTA RPT and SVC QTA MIS message.

7.2.2.13 Use of DUPE

Include a new number and the procedure signal DUPE as the first word of the text when re-transmitting a message in response to a SVC QTA RPT message.

7.2.2.14 Use of FLW REC

When a repetition of a multi-addressed message is requested:

a) use the FLW REC procedure and resend the message to the addressee requesting the repeat, and
b) do not include the procedure signal DUPE.

7.2.2.15 Service correction messages

If the text of a transmitted message is mutilated or incomplete, transmit a service correction message to all original addressees. For example:

121212 YBBBYOYX

SVC CORRECTION 121000 YBBBYOYX STOP

(TEXT)

7.2.2.16 Transmission of SS priority messages to closed units

When a non-continuous unit is closed, the COMC must send received SS priority messages to:

a) the responsible centre; and
b) the closed unit.

7.2.2.17 Re-opening of non-continuous units

When a non-continuous unit is reopened, ensure that all relevant messages received while closed are complete.

Check by reference to the CSN and obtain new copies when necessary.

7.2.2.18 AAMS restoration

The AAMS can be restored to service in several states:

See: AAMS AIDA-NG Operator's Guide (MAN-277) 3.7.9 Core Reboot

On reconnection a SVC LR/LS message will be sent to each unit.

The AAMS automatically checks the CSNs of received messages and will send QTA MIS messages where appropriate.

The COMC will send a SVC message advising of the outage and requesting users resend messages transmitted during a specified time period.

All ATS units should check their received messages and send a SVC QTA MIS message to YSCBYFYX if a CSN discrepancy has occurred.

7.2.2.19 Re-addressing/redirection of messages

Advise the message originator when a message has been addressed incorrectly using the following message format:

SVC YR [ORIGIN LINE] - (insert brief details of msg) e.g. FPL TJF NOT RQ THIS STATION. REQ YOU PROTECT TO CORRECT ADDRESSEE.

Note: *Occasions do arise when the recipient of a message has a legitimate requirement to redirect it to other addressees without reference to the originator.*

7.2.2.20 Receipt of QTA MSR

Send a new message with the correct addressee(s) if you are advised that a previous message was incorrect.

7.2.2.21 Dupe messages

When the originating unit receives a request for a duplicate aircraft movement message from a unit within Australia, forward the message using the following example:

121212 YBBBZEZX

DUPE <<=

(FPL-FCU...)

7.2.2.22 FLW REC

When an ATS unit did not originate the message but has been requested to forward a message, send the message using the following example:

121212 YSCBYFYX

FLW REC <<=

121111 YBBBZEZX

(FPL-FCU...)

7.2.2.23 SS priority messages

Always use the FLW REC procedure for messages of SS priority. For example:

SS YSARYCYX

162230 YBBBZRZX

FLW REC

162215 YMMMZQZA

(ALR-....)

7.2.2.24 Corrections and verifications

Ensure a message is corrected before transmission. If you transmit an incorrect message, send a correction to all addressees of the original.

If you receive an inaccurate message, request verification from the originator. Until verification is received, use your judgement.

7.2.2.25 QTA QTA messages

Discard messages received ending in the text QTA QTA.

Note: *Certain errors require messages to be cancelled using the sequence QTA QTA.*

7.2.2.26 Incomplete messages

Contact the COMC to request message repetition when the sequence CHECK TEXT NEW ENDING ADDED YSCBYFYX is added.

Note: *This ending indicates a message may have been shortened by the AAMS.*

7.2.2.27 SVC correction messages

If you receive a complete message preceded by the sequence SVC CORRECTION (ORIGIN OF INCORRECT MESSAGE) STOP, apply the correction and discard the incorrect message.

Note: *This indicates that an incorrect message was previously transmitted.*

7.2.2.28 Address stripping

Address stripping is the process performed by the AAMS of removing from the address line all addresses for which a unit receiving a copy of the message is not responsible.

7.2.2.29 PDAI and originating units

Notify the National COMC of the multi-address requirement if a PDAI (Collective Address) would be frequently used to simplify message handling.

Note: *PDAI is used to deliver multi-address messages and are administered/ managed by the National COMC under the direction of the NCC Line Manager.*

7.2.2.30 PDAI construction

Construct PDAI as follows:

a) first and second letters - either YB, YM or YU (YU series is reserved for delivery of NOTAM);
b) third and fourth letters - ZZ denoting special distribution required;
c) fifth, sixth and seventh letters - denotes the distribution to be effected; and
d) eighth letter - either the filler letter X or a letter to further define distribution.

7.2.2.31 PDAI and COMC responsibility

The National COMC is normally responsible for any necessary coordination required when allocating, modifying and cancelling a PDAI.

Note: *The COMC can provide a list of PDAI used by a particular unit, or which PDAI effect delivery to a particular unit.*

7.2.2.32 Originator addressing responsibility

Send requests for change to PDAI or for allocation of new PDAI to the National COMC by AFTN (YSCBYFYX), email or fax.

The originator is responsible for:

a) specifying the addresses when requesting a PDAI; and
b) notifying or approving any changes to a PDAI.

Note: *When PDAI are allocated to Australian originators by an overseas administration, responsibility for correct distribution to addressees within that country rests with the allocating country.*

7.2.2.33 PDAI register and COMC

The National COMC must keep a register of all PDAI allocations, and will include:

a) the type of message for which the PDAI is to be used; and
b) its significance.

7.3 COMSOFT Aeronautical Data Access System (CADAS)

7.3.1 CADAS User Agent (UA)

7.3.1.1 Background

The AAMS manages AFTN/AMHS messages.

CADAS is used by AFTN end users to receive and transmit AFTN messages and enables messages to be handled through either screen base interaction or as printed paper copies supported by network or independent printers.

7.3.1.2 CADAS UA method of operation

Towers with CADAS UA may operate the system using:

a) Manual Print where required with manual acknowledge; or
b) Message Auto Print as specified in LIs, for all:
   i) messages with auto read-acknowledge on; or
   ii) FPL messages with manual acknowledge.

Log in the AOJ or on the Handover Sheet when using Message Auto Print.

Note: *Unless Message Auto-Print is used for all messages, they will not be acknowledged until all actions relevant to the message have been completed.*

7.3.1.3 Software update procedure

Leave the CADAS computer in the 'ready' state for approximately two hours per day to ensure all updates are received. Use an alternative computer to log in to the CADAS UA application during this period.

Note 1: *The CADAS UA operates on a corporate leased computer that receives regular software updates as part of systems management. The delivery of software updates is generally a non-notification event and is seamless to the daily use of the corporate computer. To allow for corporate software updates it is necessary to leave the computer in the ready state.*

Note 2: *To leave the computer in the 'ready' state, select restart when shutting down Windows and leave the computer on. The Service Desk, Business provides support in the use of corporate computer applications.*

7.3.1.3.1 Non-continuous towers

At non-continuous towers, leave the CADAS UA computer in the 'ready' state at tower closure.

7.3.1.4 Faults or failures

Report CADAS UA faults or failures to the COMC.

Note: *The COMC will be able to advise if there is a problem with CADAS UA message delivery. If there is no problem with CADAS UA message delivery the fault or failure is likely to be computer related.*

7.3.1.4.1 Service Desk, Business support

If the problem is computer related, contact IMS for support (Service Desk, Business) as per other corporate leased computer arrangements.

Provide the computer node when reporting faults or failures on computers used for the CADAS UA.

8 Information services

8.1 NOTAM

8.1.1 Issuing NOTAM

8.1.1.1 NOTAM originating authorities

ATS positions designated to originate NOTAM are:

a) ORM/SS;
b) SY Traffic Manager;
c) Trackmaster (TDM NOTAM only);
d) OCA holders - Towers and remote TCUs;
e) Shift Manager NBC (VOLMET, AERIS, Contingency NOTAM); and
f) Operational Change Coordinators (permanent changes to AIP publications authorised by NRFC).

Contact one of these positions if you require a NOTAM to be issued.

8.1.1.1.1 Tower OCA exceptions

Tower OCA:

a) must contact the ORM/SS to NOTAM any change to Tower hours; and
b) should not routinely issue NOTAM on behalf of the aerodrome operator.

8.1.1.2 Last resort

Use NOTAM as a last resort rather than as a means of introducing transient or long-term changes.

8.1.1.3 Coordination between ATS and ADF

Complete the necessary coordination between ATS and ADF units on airspace activation/deactivation, prior to any NOTAM being issued by the NOTAM Office.

8.1.1.4 Coordination responsibilities

Specify coordination responsibilities in LIs as required to ensure that information is provided from one source only.

8.1.1.5 NOTAM disagreements

If the NOTAM Office and the NOTAM originator disagree on its composition or issuing criteria:

a) issue the NOTAM; and
b) refer it to the NCC Duty Line Manager.

8.1.1.6 Maintenance of NOTAM records

Hold the NOTAM originator's copy and the copy received by AFTN for 90 days.

Note: *NOTAM records are maintained at the NOTAM Office in a central repository.*

8.1.1.7 Identification of standard templates

When using a standard template NOTAM held by the NOTAM Office, include the identification of the template.

8.1.1.8 Issuing regular NOTAM

Arrange for the NOTAM Office to store the NOTAM as a template when used regularly. The originator is responsible for the accuracy of the standard template.

8.1.2 NOTAM responsibilities

8.1.2.1 Responsibilities

Specific responsibilities for NOTAM action:

NOTAM requirement	Responsibility
Temporary restricted airspace or temporary controlled airspace.	ORM
Radio navigation aids **owned** by Airservices Australia.	a) BN FIR - BN SS; and b) ML FIR - ML SS.
Aerodrome lighting facilities, hazard beacons and obstruction lighting, ABN and HIAL contained within a tower's area of responsibility.	The aerodrome operator or tower OCA holder. Specify in LIs when the tower will issue NOTAM on behalf of the airport owner.
Hazard beacons or obstruction lighting outside the tower's area of responsibility.	ORM/SS or Sydney Traffic Manager as appropriate.
Tower facilities.	Tower OCA holder except where otherwise specified in LIs.

8.1.2.1.1 Responsible authority

Refer any doubt regarding the authority responsible for originating a NOTAM to the duty ORM/SS or Sydney Traffic Manager, as appropriate.

Coordinate NOTAM associated with a potential or actual contingency or continuity situation with the ORM/SS for approval prior to dissemination.

8.1.2.1.2 Responsible authority accepting responsibility

When notification is passed to the responsible authority (e.g. SS, aerodrome operator, etc.), ensure the authority accepts responsibility for any NOTAM action required.

8.1.2.2 Works Plan on facilities

Issue a NOTAM stating that a facility is not available when a Works Plan indicates a facility is unreliable (e.g. NOT AVBL DO NOT USE; FALSE INDICATIONS POSSIBLE).

8.1.2.3 Works Plans requiring a NOTAM

Enter one of the following into the NOTAM number of the Works Plan application when a Works Plan has an associated NOTAM:

a) Cxxxx/xx (actual number if known);
b) TBA (if not yet issued); or
c) Multiple (if more than one).

8.1.3 AIF requests in Eurocat

8.1.3.1 PRD AIF request procedure

Use the group abbreviation in the AIF window 'Location' field when requesting a PRD NOTAM within an Airspace PRD group.

Note: *A list of the PRD Groups and associated areas appears at AIP ERSA, Pre Flight Information and Flight Notification, Avfax Terms Listed in Alphabetical Order.*

This page is intentionally blank

9 Control practices

9.1 Provision of FIS

9.1.1 Traffic information

9.1.1.1 Recording of information

Record traffic information passed in the traffic information window. Where unavailable, or not suitable for the traffic scenario, record traffic information using one of the following methods:

a) LABEL_DATA field;
b) On paper FPS/FDE; or
c) On the scratch pad.

9.1.1.2 Initial traffic response

Instruct the aircraft to 'STANDBY FOR TRAFFIC' when you are not immediately able to provide traffic information.

9.1.2 PRD and NOTAM management in Eurocat

9.1.2.1 En route management process when Auto PRD Spreadsheet is authorised

When the Auto PRD Spreadsheet is authorised for use by the SVM, provide details on relevant PRDs, their Eurocat entry and cross checks following the procedure in the table below:

	Steps	Task
Pre-tactical process (Prior to day/period of operation)	Step 1: Data entry – SM (SS if unavailable) accountability	a) Print Auto PRD form and 'Unknown' worksheet; b) Check the 'Unknown' worksheet for NOTAM relevant to your area of responsibility that require action; c) Enter data into Eurocat; d) Remove time data for any previously active areas; and e) Initial form and retain in Aisle.
Tactical process (Day/ period of operation)	Step 2: SM (SS if unavailable) accountability	a) Distribute PRD forms to units; and b) Update Eurocat if necessary.
	Step 3: Controller accountability	a) Cross check Eurocat entry against PRD form; b) Ensure that inactive areas contain no time data; and c) Initial form and retain in aisle.
	Staff that become aware of amendments at any time	a) Advise relevant SM (SS if unavailable) for Eurocat entry; b) SM (SS if unavailable) to enter change information onto relevant PRD form and initial; and c) SM (SS if unavailable) to ask relevant controller to check Eurocat entry if necessary.

Note: *The process is not complete until Eurocat entry is checked and corrected if necessary.*

9.1.2.1.1 Local conditions

If required, ALM (Procedures) must detail in local instructions the timing of the steps in the process and the operational role accountable for completion of each step.

9.1.2.1.2 Spreadsheet updates and Manual PRD form backup

ALM (Procedures) is accountable for updating the Auto PRD Spreadsheet when required and producing blank PRD forms after each update as manual backup.

9.1.3 NOTAM display in Eurocat

9.1.3.1 En route and TCU

Display NOTAM notifying an immediate change to the following items in the AIF window at affected positions:

a) Status of relevant airspace or ATS services; or
b) Serviceability of relevant airways facilities, equipment and aerodromes.

9.1.3.2 Future events

You may delete NOTAM that detail future events from the AIF window if the validity period does not commence:

a) within the next 24 hours; or
b) prior to the creation of the next day's NOTAM print out, as applicable.

9.1.3.3 Pre-NOTAM indication

Use a TXA when changes to facilities indicate reduced serviceability and are not yet notified by NOTAM.

9.1.3.4 Withdrawal of instrument approach procedures

Advise the SS (via the SM if applicable) of changes to the availability of an IAP when:

a) the location is non-towered;
b) there is no METAR/SPECI available; and
c) there is no other IAP available.

Note 1: *IAP non-availability may be notified by NOTAM or caused by navaid un-serviceability. RAIM failure does not affect IAP availability for this purpose.*

Note 2: *Non-towered locations include locations with non-continuous towers.*

9.1.3.4.1 Specific locations

Specify in local instructions locations where the SS/SM must be advised of changes to availability of any IAP.

9.1.3.4.2 Other locations

Advise the SS/SM of the unavailability of RNAV approaches at all other locations.

9.1.3.4.3 Notify the TOC

At the time of non-availability of an IAP, the SS shall:

1) notify the TOC to switch the alternate minima to the default setting for that location;
2) monitor the NOTAM for cancellation, if applicable; and
3) notify the TOC to re-activate the alternate minima when the instrument approach has been restored to service.

Note: *Advance NOTAM may need to be monitored by the SS for TOC advice.*

9.1.4 Non-routine MET products in Eurocat

9.1.4.1 Display on the ASD

Display text on screen with location and issue time on the ASD when relevant FIS is available.

9.1.4.1.1 Information on behalf of another unit

If passing this information on behalf of another unit:

a) voice coordinate with the other unit; or

b) enter the information in the LABEL_DATA or GLOBAL_OPS_INFO field.

9.1.4.1.2 Remove text area

Remove the text on screen when broadcasts/transmissions are no longer required.

9.1.4.2 Request latest data

Ensure you have the latest METAR/SPECI report prior to provision.

Note: *The SPECI filter may prevent automatic delivery of the latest information.*

9.1.5 Amended ATIS

9.1.5.1 Broadcast of amended ATIS

When notification of an amended ATIS is received, en route controllers must broadcast its availability to aircraft.

9.2 Clearances

9.2.1 Off route procedures

9.2.1.1 Updating the FDR

Update the FDR route when an aircraft is authorised or cleared to operate on:

a) a route different to the FDR; or
b) tracks that can be reasonably approximated.

9.2.1.2 On completion of vectoring

On completion of vectoring, re-route the FDR when an aircraft resumes its own navigation.

9.2.1.3 Approved deviation

When the actual route is unknown or cannot be approximated, and deviations from the cleared or nominal route are approved:

a) record the deviation in the:
   i) OTD on FPSNA enabled sectors; or
   ii) OTD or LABEL_DATA field on other sectors; and
b) update the FDR once positive tracking advice is received from the pilot.

9.2.1.3.1 Within ATS surveillance system coverage

You may re-route a Flight Plan or ADS-C position symbol to its ATS surveillance system position symbol and then via an accurately approximated track for the aircraft.

9.2.1.3.2 If FDR route is not modified

If the FDR route is not modified, acknowledge any alerts received.

9.2.1.4 Non-approved deviations

When an aircraft deviates from an approved or advised route, obtain the pilot's tracking intentions:

a) before amending the cleared or nominal route; and
b) prior to modifying the FDR or updating the deviation in the OTD or LABEL_DATA field.

9.2.1.5 If aircraft will not rejoin route

When an aircraft's deviation will continue outside ATS surveillance system coverage:

a) ensure the FDR route matches the cleared route before losing identification; and
b) record the deviation in the:
   i) OTD on FPSNA enabled sectors; or
   ii) OTD or LABEL_DATA field on other sectors.

9.2.1.6 Rejoining a STAR

As far as practicable, issue a REJOIN STAR expectation when an aircraft may rejoin a STAR after vectoring.

9.2.1.6.1 No rejoin expectation

Prior to hand-off, voice coordinate or annotate in the LABEL_DATA field when an aircraft being vectored has not been issued a REJOIN STAR expectation.

9.2.2 Direct tracking

9.2.2.1 Application

You may apply direct tracking:

a) during emergencies;
b) when it results in significant benefits for separation or traffic management (e.g. weather avoidance, sequencing);
c) to enable an aircraft to rejoin route after avoiding weather, an off track separation activity or other deviation (e.g. vectoring, traffic management associated with UPR); or
d) as specified in LIs.

9.2.2.1.1 Considerations

Prior to applying direct tracking, consider:

a) the effect on separation assurance including that provided by the existing route structure;
b) potential conflicts that may be created by direct tracking;
c) the coordination required for the new route;
d) your ability to accurately monitor the aircraft's progress if the route isn't displayed on a system map;
e) establishing the aircraft on planned route as soon as possible following weather avoidance or an off track separation activity;
f) the potential for introducing pilot navigation errors caused by inputting the direct track;
g) the increase in pilot workload; and
h) terrain clearance.

9.2.2.1.2 Route segment limit

Unless operationally required, do not create route segments in excess of 600 NM or 80 minutes in length.

Note: *This facilitates automated message processing.*

9.2.3 PDC messages

9.2.3.1 Send PDC

Send PDC messages to eligible aircraft as soon as possible after the:

a) flight plan becomes Preactive (Eurocat Towers); or
b) FDE is posted (INTAS Towers).

9.2.3.2 PDC eligible aircraft

ACID		Company	Limitations
ANZ	Flight Number	Air New Zealand	
CPA		Cathay Pacific	
ETD		Etihad	
JST		Jetstar Airways	
NWK		Network Aviation	A320 Only
PAL		Philippine Airlines	
QFA		Qantas	
QTR		Qatar Airways	
RBA		Royal Brunei Airlines	
THA		Thai Airways	
UAE		Emirates	
VOZ		Virgin Airlines	F100 excluded. B737 and ATR72 may not be ACARS equipped

9.2.3.3 PDC ineligible aircraft

Do not issue a PDC to aircraft:

a) requiring an amended route clearance;
b) where the clearance limit is not the destination airport (CLEARED TO…);
c) where the route field in the message is ambiguous;
d) where the ASSR will not be allocated to the flight; or
e) with an indicator in the CPDLC-equipped column (i.e. dot, minus or plus symbol, Eurocat towers only).

9.2.3.4 Do not resend

Do not resend a PDC once it has been sent to an eligible aircraft.

9.2.3.5 Amendments

Once the PDC has been sent, pass any clearance amendments to the aircraft by voice.

9.2.3.6 Readback of a PDC

Ensure pilots in receipt of a PDC read back the SID (including RWY and/or transition if issued), STAR (if issued), transponder code and any additional requirements specified in the PDC.

Note: *Pilots should also state their parking position/bay.*

9.2.3.6.1 PDC readback

If the SID/SSR code readback is incorrect, cancel the PDC and issue the clearance by voice.

9.2.3.6.2 Request readback

If a readback of a PDC has not been received prior to the aircraft taxiing, request a readback from the pilot.

9.2.3.7 Free text message lines

When using free text message lines:

a) keep free text (line 11) use to a minimum;
b) do not exceed 40 characters, due to aircraft equipment limitations;
c) do not insert new lines in this field;
d) only use the following characters:
   i) [A.....Z];
   ii) [0.....9];
   iii) [] to denote a space; and
   iv) [XXX] to highlight special remarks e.g.
   XXX YMML CURRENTLY REQUIRES ALTERNATE XXX; and
e) use abbreviations as per AIP GEN.

9.2.3.8 Recording the PDC message

For Eurocat towers, record and/or enter on the flight progress strip the departure procedure and CFL prior to sending the PDC message.

9.2.3.8.1 ACD responsibility

For Eurocat towers, the ACD, or Coordinator when ACD is not available, must:

a) reconcile the PDC message against flight progress strip data and FDR prior to sending the PDC; and
b) annotate the flight progress strip.

9.2.3.9 Confirmation of PDC issue

For Eurocat towers, confirm PDC issue by the status change in the PDC List Window.

Note: *The PDC List Window may include aircraft ineligible for PDCs as the software only recognises the first three characters of the callsign.*

9.2.4 Departure frequency issue

9.2.4.2 Issue frequency with airways clearance - Eurocat towers, ML and AD

When a departing aircraft is cleared into an associated TCU airspace, include 'DEPARTURE FREQUENCY XXX.XX' with the airways clearance.

9.2.5 SID issue

9.2.5.1 Reissue assigned level with an amended SID

Reissue the assigned level when a previously issued SID is amended.

9.2.5.2 Virgin ATR aircraft

Do not issue RNAV SIDs to Virgin ATR aircraft.

Note: *Virgin Flight Operations advise that their ATR aircraft are unable to fly RNAV SIDs from any aerodrome.*

9.3 Altimetry

9.3.1 QNH

9.3.1.1 Area QNH discrepancy

Notify the SM when you observe a difference in Area QNH between adjoining zones or with terminal areas exceeding 5 HPA.

The SM must inform the Bureau of Meteorology of the discrepancy.

9.4 Level assignment

9.4.1 Modification of the Cleared Flight Level (CFL)

9.4.1.1 CFL for controlled flights

Record cleared levels in the CFL field.

9.4.1.2 CFL field outside controlled airspace

Set the CFL field to any actual or intended operating level(s) for flights:

a) receiving a traffic information service;
b) operating NOCOM
c) using IFR Pick-up;
d) maintaining VFR-on-top; or
e) receiving a SIS.

Note: *This may not indicate the aircraft has been issued a clearance.*

9.4.1.2.1 VFR-on-top

For an aircraft climbing to VFR-on-top, leave the CFL blank when no level restriction is assigned.

9.4.1.3 CFL set to zero

Set the CFL to zero when an aircraft:

a) is cleared for final;
b) is cleared to leave controlled airspace on descent to a destination aerodrome;
c) has advised descent outside controlled airspace to a destination aerodrome; or
d) is issued a traffic statement for descent to destination.

9.4.1.4 CFL exceptions

If the preceding paragraphs do not apply, set the CFL:

a) to the base of CTA for aircraft climbing into controlled airspace;
b) to the highest VFR level in Class E airspace for aircraft using IFR Pick-up to climb to a higher class of airspace; or
c) prior to clearance.

9.4.1.5 TMA exception

In TMA airspace, where aircraft are operating beneath the CTA steps, the CFL may be set to:

a) 'none', where the aircraft will remain within surveillance coverage prior to clearance; or
b) the planned level and 'OCTA' entered in the LABEL_DATA field.

9.4.1.6 CFL amended to 'none' - tower only

The tower may amend the CFL of an aircraft under its control to 'none' provided the:

a) aircraft assigned level will not impact other Eurocat sectors;
b) level assigned is annotated on the paper strip, and
c) PCL is amended for other than arriving or circuit aircraft.

9.4.1.7 CFL amended to 'none' - other Eurocat units

Set the CFL to 'none' when an arriving aircraft:

a) reports changing to CTAF or Multicom; or
b) is transferred to a non-Eurocat unit.

9.4.2 CFL highlight function

9.4.2.1 Assigned or operating level discrepancy

Highlight the CFL when a pilot reports an assigned or operating level different to the CFL until the discrepancy is resolved.

9.4.2.2 CFL update

Except where issuing a CFL via CPDLC, update the CFL at or immediately prior to assigning or updating an aircraft's level.

9.4.2.2.1 CFL update readback

Check the readback against the highlighted CFL.

9.4.2.3 CFL indications

A highlighted CFL indicates:

a) the CFL has not been correctly read back on the assigned frequency;
b) an aircraft has not reported on frequency; or
c) an aircraft is not maintaining continuous communications with ATS (e.g. NOCOM operations).

9.4.2.4 Aircraft call on next frequency

If you have internal frequency boundaries, highlight the CFL when you instruct the aircraft to call your next frequency.

9.4.2.5 CFL update OCTA

Update the CFL when an aircraft outside control area notifies they intend to change level. Toggle the highlight off after a traffic statement has been acknowledged.

9.4.2.6 Announced aircraft

Use the CFL highlight for announced aircraft, to indicate that a level will not change without prior coordination from the preceding sector.

9.4.2.6.1 Other circumstances - en route only

Do not toggle the CFL highlight of a non-jurisdiction position symbol ON in any other circumstance.

9.4.3 Use of PRL

9.4.3.1 Accuracy of reported levels

Update the PRL when a pilot reported level is received.

9.4.3.2 Automatic level display

Use the level automatically displayed in the PRL field when an ATS surveillance system position symbol transitions to a flight plan or ADS-C position symbol. You may apply vertical separation based on this level, provided the MCL/ABL was verified.

9.4.4 PCL

9.4.4.1 Cruising level differs

Update the PCL fields when an aircraft's cruising level differs from the planned flight level.

9.4.4.2 PCL update

Update the PCLs for inbound flights prior to the aircraft entering the FDRG.

9.4.4.3 Level change at future beacon

If the PCL field indicates a level change at a future position, only amend the PCL fields up to that position.

9.4.4.4 Intermediate level

Change the PCL fields when an aircraft will maintain an intermediate CFL for a period exceeding five minutes.

9.4.4.5 INTAS tower airspace

Ensure the PCLs are correct for aircraft entering INTAS tower airspace when the tower is required to provide a service.

9.5 Holding

9.5.1 Responsibilities

9.5.1.1 Coordination responsibility

The sector responsible for a holding pattern must advise affected sectors:

a) when holding will be, or has been, implemented; and
b) which aircraft are to hold.

9.5.1.2 Holding instruction responsibilities

When you issue holding instructions for a holding pattern in another sector's airspace, no voice coordination is required at hand-off provided:

a) the FDR is in holding mode;
b) the aircraft is assigned its holding level as coordinated (if required) with the holding sector; and
c) a requirement is issued to reach the assigned holding level (if assigned) by the holding point.

9.5.1.3 Holding pattern entry

Where possible:

a) sequence aircraft into the holding pattern in the order that they will depart;
b) position the first aircraft at the bottom of the holding pattern; and
c) step subsequent aircraft down as levels become available.

9.6 Surveillance system procedures

9.6.1 SSR code management

9.6.1.1 Code changes

Keep the number of code changes required by a pilot to a minimum.

9.6.1.2 Garbling

To minimise the loss of SSR responses due to garbling, you may instruct one of the aircraft to 'SQUAWK STANDBY'.

9.6.1.3 Formation flight garbling

When required for close or standard formations, instruct aircraft other than the formation leader to 'SQUAWK STANDBY'.

9.6.1.4 Garbling ceases

When garbling ceases, instruct the aircraft to 'SQUAWK NORMAL' using the original code.

9.6.1.5 Squawk ASSR

Instruct all flights which will operate within radar coverage to squawk the ASSR.

Note: *The coupling of an FDR to an ADS-B position symbol does not negate any requirement to assign an SSR code to the aircraft.*

9.6.1.6 RadTag aircraft

Instruct RadTag aircraft assigned a discrete code to squawk 1200 when a SIS is terminated.

9.6.1.7 Radar coupling - mismatched attributes

The warning message will be presented to the jurisdiction sector and then represented at the change of jurisdiction to the new jurisdiction sector, if the mismatch condition persists.

Take the following action after receiving these warning messages:

Warning	Action
[ACID] coupled to PSSR not ASSR aaaa [aaaa = SSR code]	Instruct pilot to squawk ASSR.
[ACID] detected squawking bbbb - not ASSR [bbbb = detected SSR code]	Instruct pilot to squawk ASSR.
Mismatched Aircraft Address or Aircraft_ID (zzzzzz) on coupled track [ACID] [zzzzzz = ICAO Aircraft Address OR Aircraft Identification being transmitted]	**Mismatched Aircraft Address:** Amend the flight planned CODE/ to reflect the transmitted Aircraft Address. Confirm the registration of the aircraft and amend the flight plan as necessary. **Mismatched Aircraft Identification:** Notify the pilot of the mismatch. Instruct the pilot to re-enter the correct Aircraft Identification [ACID] (in some aircraft this may not be possible in flight).

Note: *Some ADS-B installations cannot operate independently of the SSR transponder. If unable to comply with an instruction, the pilot will advise ATC and request alternative instructions.*

9.6.1.8 Special event code

Code 4400 is available for special events where there is an operational advantage to having participating aircraft squawk a discrete code, e.g. to determine whether an aircraft is approved to operate within a TRA.

The code should not be published and only be used by prior agreement with the controlling authority for the event.

9.6.1.9 Local use SSR codes

The following semi-permanent SSR codes are authorised for local use:

Code	Unit	Code	Unit	Code	Unit	Code	Unit
0002	EN TWR	0020	SY TCU	0040	CB TWR	0060	PH TCU
0003		0021		0041	ML TCU and BN TCU	0061	
0004		0022		0042		0062	
0005		0023		0043		0063	
0006		0024		0044		0064	
0007		0025		0045		0065	
0010	SY TCU	0026		0046	OSA (LoA_3253)	0066	
0011	ML FDC	0027		0047	OSA (LoA_3392)	0067	
0012	ALPINE	0030	ML TCU	0050	AD TCU	0070	
0013		0031		0051		0071	BASS
0014		0032		0052		0072	
0015		0033		0053		0073	
0016		0034		0054		0074	
0017		0035		0055		0075	PH TCU
		0036		0056		0076	
		0037	OSA (LoA_3205)	0057		0077	
				0650		0660	
				0651		0661	
				0652		0662	
				0653		0663	
				0654		0664	
				0655		0665	
				0656		0666	
				0657		0667	

9.6.1.10 Semi-permanent SSR LoA

Units may assign codes from their block for use by specific aircraft. Units must have an LoA with the appropriate operators specifying:

a) the assigned code;
b) the aircraft registration to which the code is assigned;
c) the callsign; and
d) use of the approved code only for the assigned aircraft registration and in conjunction with the approved callsign.

9.6.1.10.1 Postcode principles

Only use callsigns complying with the 'postcode' principle where there is a possibility of the same basic callsign format being assigned by another Unit (due to Avcharges and other complications). See AIP GEN 3.4.

9.6.1.10.2 LoA signatories

Include other affected units in the LoA where operations with the allocated code/callsign affects more than one unit (e.g. an aircraft assigned a code from the tower block operating in adjacent TCU or en route airspace).

9.6.1.11 ATC initiated testing of SSR emergency codes

Restrict ATC initiated testing of SSR emergency codes to Virgin or Qantas aircraft. Advise the ORM/SS, who will notify the Airline's Operational Control Centre, at least 30 minutes prior to test commencement.

9.6.2 Aircraft without a serviceable transponder

9.6.2.1 Specific serviceable transponder exemption

When ATC may approve exemption from carriage of a serviceable transponder, the tower OCA holder may authorise the exemption if the clearance will only affect the tower airspace.

If the initial clearance will affect an adjacent Sector or TCU, coordinate and obtain approval from the affected units prior to issuing a clearance.

9.6.2.1.1 Advice to pilot

Inform the pilot that the exemption is only applicable for the flight's initial clearance.

9.6.3 RadTag

9.6.3.1 RadTag information

Use the RadTag function to manage operations such as circuits, pop-ups, SIS and VFR arrivals.

Note: *RadTags are not eligible for MSAWs or STCAs with uncoupled radar position symbols or other RadTags.*

9.6.3.2 Flights within one RDP partition

Use a RadTag only for flights wholly contained within one partition.

Note 1: *INTAS towers are considered a separate partition.*

Note 2: *A RadTag cannot be seen outside the partition where it was created.*

9.6.3.3 Stereo plans preferred

Use stereo plans in preference to RadTags for aircraft that require a service but have not submitted a flight plan.

9.6.3.4 Restrict RadTags

Where a stereo plan is not practical, restrict RadTags to:

a) VFR aircraft;
b) aircraft operating in proximity to, but remaining outside, the FDRG boundary;
c) IFR aircraft performing circuit operations; and
d) IFR aircraft prior to creating an FDR.

9.6.3.5 Wake turbulence category

Where required, include the wake turbulence category when creating a RadTag.

9.6.4 ADS-B procedures

9.6.4.1 ADS-B usage

You may use a class 1 ADS-B symbol (four bladed propeller) to provide an ATS surveillance service.

9.6.4.2 ADS-B barometric level

The ADS-B level displayed in an aircraft's label is the ADS-B barometric level.

9.6.4.3 RAIM mosaic display

Display the RAIM mosaic if the RAIM button is illuminated and ADS-B derived surveillance separation is being used.

Note: *ADS-B positional information may still be received from aircraft within predicted RAIM outage areas.*

9.6.4.4 ADS-B class 2 position symbol

Do not identify aircraft displayed as an ADS-B class 2 position symbol (three bladed propeller).

9.6.4.4.1 Procedural separation and coordination

Apply procedural separation and coordination parameters to aircraft displayed as ADS-B class 2 position symbols.

9.6.4.4.2 Foreign FIR

You may use an ADS-B class 2 position symbol observed in a foreign FIR for situation awareness and procedural separation.

9.6.4.4.3 Use of ABL

Only use the ABL for separation once coordination has been received and the level has been verified.

9.6.4.5 Outage monitoring

Report the absence of expected ADS-B position symbols to the SM/SS.

9.6.5 Flight ID management

9.6.5.1 FDR manual couple to ADS-B

If automatic coupling does not occur, manually couple the FDR to the ADS-B position symbol by:

a) identifying the aircraft in accordance with MATS;
b) selecting SSR ALL - this will display the aircraft address in the ADS-B position symbol label; and
c) entering the displayed aircraft address in Field 18 of the FDR as CODE/<six hexadecimal characters> (e.g. CODE/A23E81).

9.6.5.2 Decoupling code

You may decouple an FDR from an ADS-B position symbol by:

a) entering CODE/000000 in Field 18 of the FDR; or
b) amending an existing aircraft address code in Field 18 to CODE/000000.

9.6.5.2.1 CODE/000000 restriction

Do not use CODE/000000 for outbound international flights due to the possible effect on AIDC messaging.

9.6.6 Aircraft without a serviceable ADS-B transmitter

9.6.6.1 Approvals issued by Airservices

The ORM may issue an approval to operate if an aircraft's ADS-B equipment becomes unserviceable before or in flight.

9.6.6.1.1 Failure before flight - ORM responsibilities

When an aircraft's ADS-B equipment has failed before flight, inform the operator that:

a) approval is only applicable for a single flight;
b) the aircraft must plan below FL290;
c) clearance to operate is solely at the discretion of the controller and subject to operational conditions;
d) ADS-B equipped aircraft will be afforded priority; and
e) they must plan RMK/ATC APPROVED NIL ADSB and preferred flight level in Field 18 of the flight plan.

9.6.6.1.2 ORM coordination

The ORM must coordinate with affected units prior to approving the flight to operate in controlled airspace.

9.6.6.1.3 Failure in flight - ATC responsibilities

When an aircraft's ADS-B equipment fails in flight:

a) seek ORM approval to allow the flight to continue operating in controlled airspace and, if approved, insert RMK/ATC APPROVED NIL ADSB in the flight data record; or
b) deny approval and re-clear the aircraft out of controlled airspace.

9.6.6.1.4 Failure in flight - ORM responsibilities

If an aircraft's ADS-B equipment fails in flight and affected ATC units are:

a) able to accommodate the flight, approve the flight to continue operating in controlled airspace; or

b) unable to accommodate the flight, deny approval to continue operating in controlled airspace.

9.6.7 Error reporting - Mode A/C/S and ADS-B

9.6.7.1 ATC actions

If an expected surveillance position symbol is not displayed, unexpectedly drops or displays in an incorrect position:

a) advise the flight crew and instruct them to recycle the transponder/transmitter and/or select the secondary transponder/transmitter;

b) advise the flight crew of the result of any transponder/transmitter change, and request that the issue be checked post-flight;

c) record details for reporting including, in the case of SSR Mode A/C/S errors, the transponder type; and

d) for unresolved ADS-B errors, instruct the pilot to contact the NCC by telephone after arrival.

9.6.7.1.1 Error reporting

The SM/ORM/SS must:

a) for non-display of an expected ADS-B track, check the ICAO Aircraft Address (24 bit code) against the ADS-B Blacklist (located at ISS_CB0-1978001); and

b) report transponder/transmitter errors as follows:

Occurrence	Report
Surveillance Track - incorrect track position, unexplained track drop or absence of track.	ATS Occurrence - Abnormal operations - Malfunction of Aircraft System. Additionally, if 9.6.7.1 ATC actions point d) above is implemented, complete the ADS-B Blacklist Amendment (C-FORMS0370) form
Other suspected SSR transponder or ADS-B transmitter errors.	ATS Occurrence - Abnormal operations - Malfunction of Aircraft System.
Transmission of incorrect Aircraft Identification or Mode 3/A code which cannot be rectified by the pilot in-flight.	ATS Occurrence - Abnormal operations - Malfunction of Aircraft System.
Incorrect flight planning of ADS-B or ICAO Aircraft Address.	ATS Occurrence - Operational information - ATS message/flight planning error.
Transmission of incorrect ICAO Aircraft Address.	ASID - Surveillance Avionics.

9.6.8 Using Ultimate Fallback (UFB) Display - Eurocat

9.6.8.1 Use a scratch pad

When applying separation using the UFB, record the following information as necessary on the scratch pad:

a) Callsign;
b) SSR code;
c) Completed coordination;
d) Frequency in use;
e) CFL (and PRL if required)
f) ATOs and PETOs (as required); and
g) Clearance information.

9.6.8.2 Surveillance environment

Refer to the UFB Scale Marker when applying surveillance separation.

9.6.8.3 Procedural environment

In the procedural environment, translate aircraft positions onto the supplied UFB console laminated map.

9.6.9 Eurocat Degraded Modes and UFB

9.6.9.1 Contingency measure and primary source

Use the UFB as the primary source of situation awareness when:

a) a Eurocat Partition failure occurs until the:
   i) partition is restored; and
   ii) FDRs are updated and display the correct information;
b) a workstation failure occurs until:
   i) all aircraft are transferred to another controller; or
   ii) the controller has moved and is operating from another console;
c) a power failure affecting more than one workstation occurs and the UFB restarts and displays ATS surveillance system information before Eurocat returns to full operation; or
d) required by the SS or TCU Supervisor.

Note: *Following a power failure the UFB has only limited value. UFB flight plan strip information will not be available. Radar and ADS-B position symbols will not be coupled if the UFB displays information before Eurocat returns to full operation, and will display the SSR code and FLTID respectively.*

9.6.9.2 Contingency measure and secondary source

Use UFB as a secondary source of situation awareness if it provides information not displayed by Eurocat.

9.6.9.3 Radar bias monitoring

The SS, or person permitted to carry out the TCO function in Perth or Sydney, should monitor the radar status window for uncommanded switches from Auto to Manual bias.

9.6.9.3.1 Return to Auto bias

When a radar switches from Auto to Manual bias, the SS or person permitted to carry out the TCO function in Perth or Sydney must:

a) switch the radar to Auto bias only once within a three hour period; and

b) if the radar switches to Manual bias again within three hours, initiate fault reporting.

Note: *A radar will switch to manual bias when the system calculates a bias of greater than 0.3°.*

9.7 Non-surveillance system procedures

9.7.1 Use of PETOs

9.7.1.1 PETO required

A PETO is required to be set when:

a) coordination alerting is not available and coordination has been completed to an international ATS Unit; or
b) coordination is received from an international ATS Unit.

9.7.1.2 PETO not required

When coordination alerting is available, a PETO is not required for aircraft that:

a) leave ATS surveillance system coverage; and
b) will enter another ATS Unit's airspace at or before the next mandatory reporting waypoint.

9.7.1.3 Remove PETOs

You may re-route the FDR to remove PETOs when an aircraft is identified and the PETO is no longer required.

9.7.1.4 Information sources

When setting PETOs use:

a) pilot estimates;
b) estimates based on ATS surveillance system data; or
c) the coordinated estimate.

9.7.2 Flight Plan Position Symbol procedures

9.7.2.1 Set PETOs

Set a valid PETO:

a) before an aircraft leaves ATS surveillance system coverage;
b) for the destination aerodrome if the aircraft will leave ATS surveillance system coverage before the circuit area;
c) when you receive a position report outside ATS surveillance system coverage; or
d) when you apply time separation standards.

9.7.3 ADS-C procedures

9.7.3.1 Using ADS-C

Instruct the pilot to CONFIRM ADS-C ARMED if CPDLC messages can be exchanged with an aircraft but:

a) an ADS contract cannot be established; or
b) ADS-C reporting ceases unexpectedly and cannot be re-established.

Note: *Adjacent ATS units may request a logon contract request via Address Forwarding when an aircraft is operating close to but not crossing the FIR boundary, and is usually done for monitoring purposes. Sectors within Eurocat do not have this capability.*

9.7.3.2 Lateral Deviation Report

If a Lateral Deviation Report warning message is received for a jurisdiction aircraft which is not expected to be deviating and not subject to a RAM alert:

a) send a Demand Contract Request; and
b) reassess separation with other aircraft.

9.7.3.2.1 Traffic consideration

If a RAM alert has not subsequently been triggered, monitor the flight until a new Lateral Deviation Event Contract is established with no route conformance alerts.

9.7.3.3 Reporting interval - controlling ATSU responsibility

Only the ATSU with control responsibility for the flight should select an ADS-C periodic reporting interval lower than the default value.

9.7.3.4 Changing the reporting interval when not the controlling ATSU

Unless required for separation, coordinate with the affected ATSU when a change to the reporting interval for a flight operating in their airspace is required.

Note: *The avionics of an aircraft with multiple ADS-C contracts reporting at short intervals to multiple ground systems may compile ADS-C reports faster than the avionics and/or ACARS system can process them. This may result in the avionics discarding newly compiled reports.*

9.7.4 PBN authorisations

9.7.4.1 PBN, flight planning and applicable standards

When Item 10 and 18 of a flight plan have the appropriate codes entered, you may use the following approaches/departures and standards:

PBN Authorisations	Flight Plan		D1-D4	7 CEP	14 CEP	* GNSS Arrival
	Item 10a	Item 18				
RNP APCH	G + R	PBN/S1 PBN/S2				YES
RNP AR APCH	G + R + I	PBN/T1 PBN/T2	RNP AR APCH/RNP AR DEP			YES
RNP 1	G + R +D + I	PBN/O1				YES
	G + R	PBN/O2				
RNP 2	G + Z	NAV/RNP2	YES	YES		YES
RNP 4	G + R	PBN/L1	YES		YES	YES
RNP 10/RNAV 10	G + R	PBN/A1			YES	YES
	I + R					
RNAV 5	I + R	PBN/B5			YES	
	G + R	PBN/B2				YES
	I + G + R	PBN/B1				YES
* To conduct a GNSS Arrival the aircraft requires an azimuth aid unless covered by a CASA Instrument authorising otherwise.						

9.8 PETO entries and RAM alerts

9.8.1 RAM alerts and estimate monitoring

Monitor estimates for aircraft subject to a RAM alert and set PETOs when you:

a) use system tools to determine or monitor a time separation standard; or
b) coordinate using AIDC messaging to an international ATS Unit.

9.9 CPDLC procedures

9.9.1 Communication responsibility and Data authority

9.9.1.1 Primary means of communication

Use CPDLC as the primary means of communication with suitably equipped aircraft beyond the range of VHF voice communications.

9.9.1.2 Secondary means of communication

You may use CPDLC as a secondary means of communication in conjunction with VHF voice communications.

9.9.1.3 Returning to VHF communications

Close all CPDLC dialogues and return the aircraft to VHF voice communications prior to handing off to a receiving sector unless a CPDLC transfer has been agreed to.

9.9.1.3.1 Monitor message

If a CPDLC transfer has been agreed to, send a MONITOR uplink message specifying the next VHF frequency to the aircraft at the appropriate position or time.

9.9.1.4 Backup voice frequency

Advise all aircraft using CPDLC of a backup voice communication medium.

Note: *In oceanic areas, this may be a third party HF voice frequency.*

9.9.1.5 Shutdown of Eurocat CPDLC

Prior to a planned shutdown of the Eurocat CPDLC system, or immediately following an unplanned shutdown:

a) establish voice communications with CPDLC connected aircraft; and
b) instruct pilots to DISCONNECT CPDLC.

9.9.1.6 Connection request message

On receiving the downlink message CONNECTION REQUEST FAILED CURRENT DATA AUTHORITY [unit name], request the previous unit to send another NEXT DATA AUTHORITY message to the pilot. Once the previous unit has confirmed sending the message, send another CONNECTION REQUEST message manually.

9.9.1.7 Disconnect CPDLC

Instruct the pilot to DISCONNECT CPDLC and continue all communications on the voice frequency when attempts to establish a CPDLC connection have failed.

9.9.1.8 Data authority

Ensure the centre holds data authority for all CPDLC connected aircraft under your jurisdiction.

9.9.1.8.1 Not current data authority

On receiving the downlink message NOT CURRENT DATA AUTHORITY, request the previous unit to send an END SERVICE message to the aircraft. If unsuccessful, instruct the pilot by voice to 'DISCONNECT CPDLC THEN LOGON TO [facility designation]'.

9.9.1.8.2 Status displayed as a minus (-)

Where CPDLC status is a minus (-), request a CPDLC position report from the pilot as soon as possible after the aircraft has:

a) passed 45 NM from ADEP;
b) entered the FIR by 3 minutes; or
c) established a new CPDLC connection.

9.9.2 Transferring CPDLC connections

9.9.2.1 Address Forward

Do not Address Forward to a unit beyond a foreign non-CPDLC FIR unless detailed in LIs/LoA.

9.9.2.2 Transfer to military control

Use the following phrase to advise CPDLC connected aircraft transferring to military control that CPDLC services are not available until the aircraft re-enters civil airspace:

'[ACID] CONTACT [unit name] [frequency]. CPDLC SERVICES NOT AVAILABLE UNTIL [time/position]'.

Maintain the CPDLC connection while the aircraft is under military control.

9.9.2.2.1 Coordination with military

Coordinate with the military unit when a CPDLC downlink is received from a CPDLC connected aircraft under their control. Where the military unit advises it will reply to the pilot's request by voice, respond to the open CPDLC message with the pre-formatted free text message element: REQUEST RECEIVED RESPONSE WILL BE VIA VOICE.

9.9.2.3 Intra-centre transfer

Advise the receiving controller of any open CPDLC messages prior to a CPDLC connected aircraft being transferred across an intra-centre boundary.

9.9.3 Terminating CPDLC connections and End Service messages

9.9.3.1 Open uplinks at connection transfer

If open uplink messages exist at the connection transfer time, uplink the pre-formatted free text message element CHECK AND RESPOND TO OPEN CPDLC MESSAGES. If required, coordinate the delay in CPDLC transfer with the next centre.

9.9.3.1.1 Manual End Service message

Send a manual END SERVICE message when all CPDLC message dialogues have been closed.

9.9.3.1.2 Manually terminate connection

If it is not possible to close a CPDLC dialogue:

a) advise the next unit that their CPDLC connection may be lost; and
b) manually terminate the CPDLC connection.

9.9.3.2 CPDLC FIR

If an aircraft is entering a CPDLC FIR and the system transfer had not been successful, manually send the End Service message prior to the FIR boundary.

9.9.3.3 Transfer delay

If the CPDLC transfer will not be completed prior to the aircraft arriving at the FIR boundary position, uplink the pre-formatted free text message element EXPECT CPDLC TRANSFER AT [time].

9.9.3.4 Non-CPDLC FIR

If an aircraft is entering a non-CPDLC FIR, send the End Service message 10 minutes after the frequency transfer point.

9.9.3.5 Manual logon

When a CPDLC disconnection by the ground facility is not successful, instruct the pilot to 'DISCONNECT CPDLC THEN LOGON TO [facility designation]'.

9.9.4 Managing CPDLC dialogues

9.9.4.1 Update the FDR

Update the FDR and/or HMI (as applicable) before you acknowledge a closed CPDLC dialogue in the Current Messages Window.

9.9.4.2 Close CPDLC dialogues

When a CPDLC message requiring a CPDLC response is negotiated by voice, close the dialogue with an appropriate CPDLC message.

9.9.4.3 Use pre-formatted messages

Issue clearances using only pre-formatted message elements. Construct CPDLC dialogues using pre-formatted elements where possible.

9.9.4.3.1 ADEP removal

Remove ADEP information from the Route Clearance window when amending a route clearance using the following message elements:

a) CLEARED TO [position] VIA [routeclearance] (UM79); and

b) AT [position] CLEARED [routeclearance] (UM83).

Note: *Retaining ADEP information can cause an uplinked clearance to be rejected by the aircraft avionics. See ATM Data Link Handbook for more information on the restrictions that apply to pre-formatted messages.*

9.9.4.4 Clarify ambiguities

Clarify with the pilot when doubt or ambiguity exists in a CPDLC message.

9.9.4.5 Duplicate message

Respond to duplicate downlink messages with an identical response and add the free text element CLEARANCE ALREADY SENT.

9.9.4.6 Non-approved measurement units

If non-approved measurement units are received in a CPDLC downlink message, request the information be repeated using Australian AIP approved measurement units.

9.9.4.7 Downlink report message

Only use the downlink report message element AT [time] [distance] TO/FROM [position] when using CPDLC distance reports to apply separation.

9.9.5 Levels, estimates and clearances

9.9.5.1 Level reports

Only use CPDLC reports at or above FL130 to apply vertical separation.

9.9.5.2 Inaccurate estimates by ADS-C

If ADS-C position reports indicate inaccurate waypoint estimates, notify the pilot using voice or the following pre-formatted free text message element:

ADS-C ESTIMATES APPEAR INACCURATE. CHECK FMS.

9.9.5.3 Conditional clearances

Add the pre-formatted message element MAINTAIN [level] to the beginning of the uplink message when issuing a conditional clearance.

9.9.5.4 Issuing a vertical clearance with a requirement

Use the pre-formatted message element CLIMB (or DESCEND) TO REACH [level] BY [time/position] when issuing a vertical clearance with a requirement to reach the assigned level by a waypoint or a time. For example:

CLIMB TO REACH 370 BY 1400 or CLIMB TO REACH 370 BY APOMA

9.9.5.4.1 Intermediate level requirement

When issuing an intermediate level requirement, add the pre-formatted free text message element REACH [level] BY [time/position] to a pre-formatted climb or descent instruction. Do not use as a stand-alone message. For example:

CLIMB TO 370. REACH 350 BY 0300 or

DESCEND TO 310. REACH 330 BY ELATI

9.9.5.4.2 Issuing a vertical clearance with a distance requirement

When issuing a vertical clearance with a requirement to reach a level by a distance from a waypoint, add the pre-formatted free text message element REACH [level] BY [distance] BEFORE (or AFTER) [position] to a pre-formatted climb or descent instruction. Do not use as a standalone message. For example:

CLIMB TO 390. REACH 370 BY 100 NM BEFORE ATMAP or

DESCEND TO 330. REACH 330 BY 55 NM AFTER KALUG.

Note: *This message element may be used for assigned or intermediate level requirements.*

9.9.5.5 Operating at block levels

When a CPDLC connected aircraft without an ADS contract is inbound to the FIR and operating in a block level clearance, uplink CONFIRM ASSIGNED LEVEL on first contact. The correct response from the pilot is ASSIGNED BLOCK [level1] TO [level2].

9.9.5.5.1 Verifying the block clearance

If a response other than this is received, reissue the block clearance by CPDLC or voice communications.

9.9.5.6 Cancel block levels

To cancel a block level clearance, uplink an appropriate pre-formatted vertical clearance message element. You may also append the message element REPORT LEVEL [level].

9.9.5.7 Cruise climb

Respond to a CRUISE CLIMB request with the following auto-loaded response:

UNABLE

CRUISE CLIMB PROCEDURE NOT AVAILABLE IN AUSTRALIAN ADMINISTERED AIRSPACE.

Do not include a climb instruction in the reply.

9.9.6 Multi-element messages

9.9.6.1 Minimise multi-element messages

Minimise the use of CPDLC multi-element uplink messages and keep message size to a minimum.

Only combine clearance or instruction message elements into a single uplink message if they are dependent on each other.

9.9.6.2 Clearance requests

Address each clearance request element in the response where a message containing multiple clearance requests is received and all clearance request elements can be approved. For example:

PILOT: REQUEST CLIMB TO [level]. REQUEST DIRECT TO [position]

ATC: CLIMB TO [level]. PROCEED DIRECT TO [position]

9.9.6.3 UNABLE

Respond with UNABLE if any element of a downlink clearance request cannot be approved. Send a separate uplink specifying the elements that can be approved, or any alternative clearances. For example (when a requested level is not available):

PILOT: REQUEST CLIMB TO [level]. REQUEST DIRECT TO [position]

ATC: UNABLE

ATC (as a separate message): PROCEED DIRECT TO [position]

9.9.7 Delay to clearance issue

9.9.7.1 Clearance not immediately available

When a clearance request is not immediately available, respond using the message element:

a) UNABLE [DUE TRAFFIC/AIRSPACE];
b) STANDBY when the request is being assessed and a response will be sent within 10 minutes; or
c) REQUEST DEFERRED when a delay of greater than 10 minutes can be expected before a response is sent.

9.9.7.2 STANDBY

After responding to a clearance request with STANDBY, send another message within 10 minutes to inform the pilot of the progress of their request.

9.9.8 Weather deviations

9.9.8.1 Weather deviation

Issue a weather deviation via CPDLC by including the deviation requested by the pilot, or as amended by ATC, and:

a) clearing the aircraft direct to a subsequent waypoint once clear of weather, using the pre-formatted uplink WHEN ABLE PROCEED DIRECT TO [position];
b) appending the pre-formatted uplink REPORT BACK ON ROUTE to allow access to the appropriate downlink report; or
c) instructing the aircraft to rejoin route by a time or a position using the pre-formatted uplink REJOIN ROUTE BY [time/position].

9.9.8.2 Check content

Check the content of a CPDLC weather deviation request for free text elements. Amend the direction and/or distance of the deviation as necessary when issuing the weather deviation.

9.9.9 Relay messages

9.9.9.1 Relaying messages

Do not send pre-formatted CPDLC messages when a CPDLC connected aircraft is relaying messages to a non-CPDLC aircraft.

9.9.9.2 Relay message

When constructing a relay message, use the target aircraft's radiotelephony callsign rather than its ICAO three letter designator. For example:

RELAY TO QANTAS246 ON 123.8. BRISBANE CLEARS QANTAS246. CLIMB TO 370 (i.e do not use QFA246.)

9.10 Auto release procedures

9.10.1 Procedures

9.10.1.1 Auto release procedures

Where auto release procedures for departing aircraft are the default method of operation, specify in LIs:

a) agreed SIDs and headings associated with a runway configuration; and
b) any additional procedures.

9.10.1.2 Eligible aircraft

Only apply auto release procedures to fixed wing IFR aircraft.

9.10.1.3 Coordination

Auto release procedures do not preclude voice coordination between the ADC and DEP if necessary. Voice coordination for any departure does not suspend auto release procedures.

9.10.1.4 Nominated runways

Only apply auto release procedures to departure runways nominated on the ATIS.

9.10.1.5 Suspension of auto release procedures

Suspend auto release procedures when necessary, e.g. during weather deviations or runway changes.

9.10.1.5.1 Reason for suspending auto releases

Include a reason when coordinating the suspension of auto release procedures.

9.10.1.5.2 Departure coordination

Coordinate all departures when suspended.

9.10.1.5.3 Opposite direction runway operations

Do not use auto release procedures when using opposite direction runway operations (excluding SODPROPS).

9.10.1.6 Runway change

Coordinate the suspension of auto release procedures prior to a runway change.

9.10.1.7 Suspension phraseologies

Use the following phrases when suspending auto release procedures:

Initiating Unit: 'SUSPEND AUTO RELEASE [RUNWAY(S) ---] [reason]'.

Readback: 'AUTO RELEASE SUSPENDED [RUNWAY(S) ---]'.

ADC must use the phrase '(Callsign) RELEASED' to advise DEP of an auto release aircraft issued with a line-up or take-off clearance.

9.10.1.8 Display status

Display auto release status at affected positions using a System Map, TXA or 'AUTO OFF' button (INTAS TDM) when auto release procedures are suspended.

9.10.1.8.1 Auto release off reminder strip

Display the 'Autorelease Off' reminder strip in the ADC flight progress board at non-INTAS towers.

9.10.1.9 Coordination and phraseology when resuming auto release procedures

DEP may resume auto release procedures using the phrase 'RESUME AUTO RELEASE [RUNWAY(S)…]'.

Acknowledge this coordination using the phrase 'RESUME AUTO RELEASE [RUNWAY(S)…]'.

If there has been a change to the runway configuration include a brief description of the available auto release procedures. For example:

'RESUME AUTO RELEASE RUNWAY19'.

9.10.1.10 Conditional Auto release

Do not use conditional instructions for resumption or cancellation of Auto release in INTAS Towers.

10 Separation

10.1 Responsibilities for separation

10.1.1 Separation responsibilities between Approach (procedural) and En route control (surveillance or procedural)

10.1.1.1 Standard separation responsibility

When departures or arrivals remain within controlled airspace the separation responsibilities are:

Departures		Arrivals	
Tower	**En route**	**Tower**	**En route**
At the time of the NEXT call, advise en route of the standard that will be applied between aircraft planned to depart tower airspace.	Before assigning a level above the standard assignable, ensure the aircraft is separated with other aircraft that are assigned levels within en route airspace.	Determine the sequence and separate between arriving and departing aircraft if the specified arrivals sequence has been passed prior to the NEXT call.	a) Provide a separated sequence; and b) Separate arriving and departing aircraft when the sequence has **not** been passed to the tower prior to the NEXT call.

10.1.2 Separation responsibilities where the Flight Plan Safety Net Alert (FPSNA) is enabled

10.1.2.1 Separation responsibility

For sectors where FPSNA is enabled, the controller remains responsible for conflict detection, planning, situation awareness and the separation of aircraft.

Note: *FPSNA, a subset of the FPCF, is a safety net only.*

10.2 Longitudinal

10.2.1 Recording distance separation

10.2.1.1 Display of distance separation

Display longitudinal distance information in the following aircraft's strip or label. Include the preceding aircraft's callsign followed by a + symbol, if required, to avoid confusion (e.g. ABC+24S@02).

See 1.3.2.1 Approved Eurocat annotations - Distance separation data

10.3 Lateral

10.3.1 General

10.3.1.1 Tables and diagrams

Lateral separation tables and diagrams may be developed by units to enable ready reference of separation between respective tracks, restricted areas and/or holding patterns for the assessment and resolution of lateral separation conflicts.

10.3.2 Production and amendment process

10.3.2.1 Lateral separation software

A software program for the calculation of lateral separation solutions may only be used by qualified OSA staff.

Note: *The program is primarily used to calculate lateral separation between crossing and intersecting tracks. The software is less suited to calculating lateral separation between tracks and restricted areas or PJE areas etc. and is unable to calculate lateral separation associated with holding patterns.*

10.3.2.2 Production, amendment and correction process

Submit an NRFC when production, amendment, removal or correction of a lateral separation diagram is required.

10.3.2.2.1 Production, amendment or correction work

For work not requiring the use of the lateral separation software or holding pattern templates, prepare a diagram based on MATS and submit it via NRFC.

10.3.2.2.2 NCSS responsibility

NCSS (Operational Standards) staff must check and endorse all lateral separation diagram data prior to authorisation by the SVM.

10.3.2.2.3 Alteration of existing diagrams

Do not alter diagrams without following this process.

10.3.2.3 Error handling

Advise your UTS/ALM if you discover an error on a published lateral separation diagram.

10.3.2.4 Routine maintenance

The UTS/ALM must complete a QA Review of the lateral separation diagrams in accordance with ATC Group Documentation Procedures (ATS-PROC-0039), and ensure the diagrams remain accurate, fit-for-purpose and relevant.

Note: *The ANS Group ATS Documentation Procedures (ATS-PROC-0039) offers guidance on the type of data to be assessed when conducting a QA review.*

10.3.3 Calculation of holding pattern lateral separation points

10.3.3.1 Introduction

As applicable the OSM, SVM or delegate will nominate persons who may use these procedures to define holding pattern lateral separation points.

Note: *Lateral separation points associated with holding patterns are plotted using holding pattern templates produced by the ADS Procedure Designers. Where the calculation of lateral separation points requires the use of these templates, NCSS (Operational Standards) staff will check the accuracy of the completed diagram(s).*

10.3.3.2 Holding pattern diagrams

When creating holding pattern lateral separations diagrams, consider:

a) the speed of the holding aircraft;
b) the holding altitude;
c) the type of navigation aid; and
d) whether the sector entry is included or not.

10.3.3.2.1 Holding at a VOR or co-sited NDB

You may apply holding pattern tolerance diagrams for holding at a VOR to aircraft holding at a co-sited NDB.

Note: *VOR holding tolerances are greater than NDB holding tolerances.*

10.3.3.2.2 Template approval

Holding pattern tolerance templates must be approved by the Chief Designer, Instrument Flight Procedures.

10.3.3.3 Determining the BLSP

Lateral separation diagrams for separation between tracks and standard holding patterns published in AIP DAP are determined as follows:

1) Plot tracks and the appropriate navigation aid tolerances on a VTC or 1:250 000 plotting chart;
2) Overlay the appropriate holding pattern tolerance template;
3) Determine the BLSP; and
4) Determine the entry and exit points in accordance with MATS.

10.3.3.4 Documentation

Record calculations on the Holding Pattern Lat Sep Worksheet (ATS-FORM-0057). Attach this worksheet and an image of any holding pattern template used to the RFC.

10.3.4 Application of holding point lateral separation

10.3.4.1 Procedure

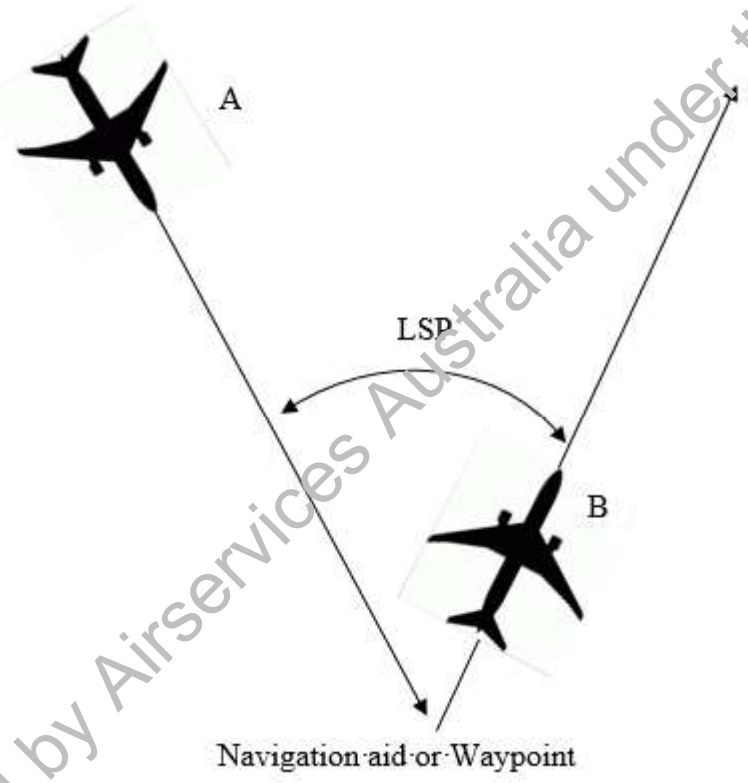
For a particular holding pattern tolerance to apply, the aircraft must pass over the holding point at or below the upper limit for the holding pattern tolerance diagram.

Lateral separation based on holding pattern tolerances that exclude the entry procedures may be applied when aircraft:

a) will enter the holding pattern on a track which is aligned with the inbound track of the holding pattern; and
b) are established in the holding pattern.

10.3.5 Procedural approach tactical application of lateral separation

10.3.5.1 Example



10.3.5.1.1 Procedure steps

Step	Procedure
1	Establish aircraft A's position outside the LSP. Refer MATS Chapter 10.4 Lateral This can be determined for example, by a DME distance report. Refer MATS Chapter 10.4 Lateral
2	Impose a temporary clearance limit (at or before the entry point) on aircraft A. A description of the holding path is not described. Refer MATS Chapter 9.2 Clearances
3	Ensure both aircraft are on the approach frequency.
4	Aircraft B must be established at or beyond the exit point prior to A reaching the entry point.
5	Assure separation by applying appropriate margins such that the requirement for A to hold will have lapsed due to B passing the exit point. If sufficient margins do not exist apply another form of separation.
6	Check the position of both aircraft at sufficient intervals to ensure that the required separation is maintained.

Note: *It is not the clearance limit that achieves separation. Ensuring aircraft A has a sufficient margin and remains outside the entry point until B has passed the exit point assures separation.*

10.4 Wake turbulence

10.4.1 Air taxiing helicopters

10.4.1.1 When not required

Wake turbulence separation is not required to or from an air taxiing helicopter(s).

10.5 Aerodrome

10.5.1 Simultaneous parallel operations - Class D aerodromes

10.5.1.1 Independent runways

Only authorise simultaneous, independent, same direction operations on a runway and a HLS when, in addition to the requirements of MATS Chapter 10.9 Aerodrome:

a) the location of the HLS is published in AIP, or a description of the HLS is provided to the pilot;
b) the landing and/or take-off path of the HLS is in the same direction and parallel to the landing and/or take-off path of the runway; and
c) the HLS designator, or description of the HLS, is included with all line-up, take-off and landing clearances.

10.5.1.2 Use of taxiways

For the purpose of authorising simultaneous independent parallel operations, you may approve the use of a taxiway as a HLS.

10.5.1.2.1 Landing/take-off roll exception

Do not use a taxiway as a HLS for helicopters that require a landing or take-off roll. Confine such operations to a runway or other landing area.

10.5.1.3 Dependent operations

When the distance between the runway and HLS is not in accordance with the spacing specified in the table in the 'Independent runways' clause in MATS Chapter 10.9 Aerodrome, consider operations to them as dependent. You may permit helicopters and fixed wing aircraft to conduct simultaneous, same direction operations to their respective areas, if in doing so their individual landing/take-off paths are treated as one for separation purposes.

10.6 RPAS operations

10.6.1 RPAS segregation

10.6.1.1 Segregation methods for RPAS at or below 400 FT AGL

Use the following methods or methods otherwise approved by Operational Standards as documented in the Risk Assessment to segregate RPAS operating Visual Line Of Sight (VLOS) with manned aircraft:

Segregation method	Conditions
Visual:	a) The distance to which the RPAS is visible has been established and can be maintained; and b) Segregation is in accordance with the requirements of MATS 10.7, Visual - ATC.
Lateral:	a) Use topographical features provided: i) RPAS is laterally contained within defined geographical limits; ii) the topographical feature provided to the RPAS operator is within 800 m of the operation; iii) the topographical feature used by the RPAS operator is available to the ATC or topographical features clear of the area are displayed to the ATC; and iv) the topographical feature for the manned aircraft is applied in accordance with MATS 10.4.2.1 or MATS 10.4.6.3; or b) Apply an appropriate ATS surveillance system separation minimum to the RPAS defined area.
Vertical:	Use one of the following altitude sources or procedures. a) For DJI RPAS using on board altimetry apply a minimum vertical segregation buffer of 500 FT between the RPAS and manned aircraft. The manned aircraft must always be above the RPAS. b) Restrict the RPAS to a height below an object of known fixed elevation AMSL, e.g. a crane, within 800 m of the RPAS operation and apply a minimum vertical segregation buffer of 500 FT between the manned aircraft and the object. The manned aircraft must always be above the RPAS.

Segregation method	Conditions
Containment below aerodrome Obstacle Limitation Surface (OLS):	The RPAS is determined to be contained below the OLS, when it is: a) tethered and below OLS height; b) restricted to a height below an object in close proximity of known fixed elevation AMSL, which is below the OLS; c) for DJI (non RTK) RPAS, using corrected on board altimetry and restricted to a level that constrains the operation below the OLS *(see table below)*; or

For DJI (non RTK) RPAS, a correction value from the table below must be added to the AGL height of the operation when assessing that the RPAS remains constrained below the OLS.

Corrections		
Flight duration (mins)	**Correction (metres)**	**Correction (feet)**
≤10	5.5	17
11-15	8	26
>15	10	32

Note: *Altitudes displayed to the Remote Pilot are altitudes AGL from the take-off point.*

d) at an altitude below the OLS based on altimetry (independent of manufacturer) derived from
   i) Laser; or
   ii) RTK (and D-RTK).

Note: *Operation of an RPAS below the OLS, ensures that the RPAS is segregated from all arrivals and departures for the runways. The risk for aircraft operating below the OLS remains with CASA.*

Shielded Operation (above OLS)	**Within inner horizontal or conical surfaces**: Operation of an RPAS within 100 m of, and below the top of, a natural or man-made object. **Within approach, departure or transitional surfaces**: Operation of an RPAS within 100 m of, and below the top of, a natural or man-made object between the RPAS and the aerodrome. Except where a manned aircraft requires operations within the shielded operation (e.g. a helipad on top of the building around which the RPAS is operating), no other segregation method need be applied between the Shielded Operation and manned aircraft.

10.7 Project Loon balloons

10.7.1 Segregation method

10.7.1.1 Segregation buffer procedure

Apply a 5000 FT buffer to segregate Project Loon balloons in controlled airspace from manned aircraft. The 5000 FT buffer applies to levels sourced from:

a) ATS surveillance system information; and
b) the Project Loon website.

Note 1: *FPSNA data does not incorporate the 5000 FT segregation buffer.*

Note 2: *Refer to LoA 3365 for Project Loon website details.*

10.7.1.1.1 Segregation buffer exception

Unless visual separation is applied, do not permit manned aircraft to transit vertically below a 15 NM radius of a Project Loon balloon while the balloon is on final descent to the ground.

10.7.2 Separation methods

10.7.2.1 ATS Surveillance system separation

You may apply ATS surveillance system separation between Project Loon balloons and manned aircraft as per MATS Chapter 10.2.

10.7.2.2 Lateral separation

You may apply lateral separation between Project Loon balloons and other manned aircraft as per MATS Chapter 10.10 using position information sourced from the Project Loon website.

10.8 High Altitude Long Endurance (HALE) RPAS

10.8.1 Segregation of approved High Altitude Long Endurance (HALE) RPAS and manned aircraft

10.8.1.1 Segregation from the TRA or observed position

For aircraft within controlled airspace, apply the following segregation parameters from the TRA boundary or surveillance position of the RPAS (regardless of whether the RPAS is within or outside of controlled airspace):

a) Vertically:
   i) 5 000 FT above; and
   ii) standard V3-2000 FT below; and

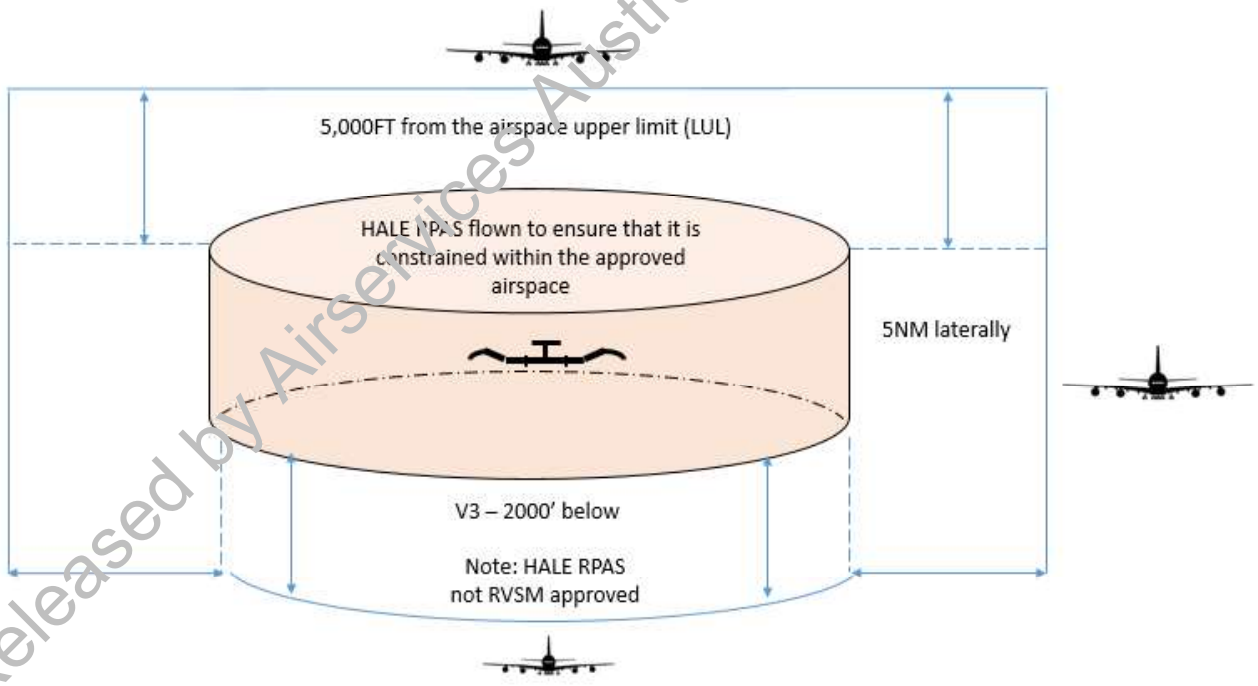
b) Laterally:
   i) 5 NM; or
   ii) if no TRA has been promulgated, apply the applicable wake turbulence buffer from MATS 10.6.5 to the RPAS surveillance position when a heavier class aircraft will climb through the level of the RPAS.

Note 1: *RPAS is not RVSM approved.*

Note 2: *When the RPAS cannot provide position information from an approved navigation source, the OAR will promulgate a TRA for the climb and descent phases of the operation.*

10.8.1.2 Approved RPAS aircraft

Airbus Zephyr is the only currently approved RPAS for this procedure.



11 Approach control

11.1 Arriving aircraft

11.1.1 Visual approach procedures

11.1.1.1 Circuit entry - VSA not assigned

Restate the previously assigned altitude when you issue the clearance to a circuit position and:

a) a visual approach clearance is not issued; or
b) there is conflicting traffic or other restrictions that preclude immediate further descent clearance.

11.1.2 Agreed flow rates - Tower/TCU

11.1.2.1 Local instructions

Document agreed flow rates for arriving aircraft, and procedures to vary those rates, in Eurocat/INTAS towers and associated TCU LIs.

Base flow rates on either time or distance.

11.2 Departing aircraft

See 12.3 Departing aircraft

11.3 Maestro

11.3.1 General

11.3.1.1 Maestro Traffic Flow Management System (TFMS)

The Maestro TFMS is used as the primary means of calculating and relaying the arrival sequence at defined airports.

11.3.1.1.1 Hours of operation

Operate Maestro H24 unless specified in LIs.

11.3.1.2 TFMS window display

Except at INTAS towers, display the TFMS window when using Maestro.

11.3.2 Maestro abbreviations

Abbreviation	Definition
FF	FF-Fix or point used as a reference for handover between APP and En route sectors.
ETA	Estimated Time of Arrival at the runway.
ETA_FF	Estimated Time of Arrival at the Feeder Fix.
STA	Scheduled Time of Arrival at the runway.
STA_FF	Scheduled Time of Arrival at the Feeder Fix.
*	Departure flight inserted not yet coupled.
+	Cross FF at published speed.
%	Manual delay other than zero.
#	Indicates priority flight - zero delay.

11.3.3 Maestro interaction

11.3.3.1 Interaction functions

The jurisdiction controller or the Flow may interact with the following functions:

a) Change ETA_FF;
b) Re-compute - normally used for weather deviations;
c) Remove a flight;
d) De-sequence;
e) Change runway - operational requirements only;
f) Manual delay; and
g) Exchange flights - for exchanging flights in holding patterns.

11.3.4 Runway assignment

11.3.4.1 Runway allocation

Assign the runway allocated by Maestro unless:

a) varied by LIs; or
b) operational requirements mean an alternative runway must be issued.

11.3.4.1.1 Operationally required runway

Unless varied by LIs, coordinate with flow any aircraft operationally requiring a non-duty runway.

11.3.4.2 Assigning aircraft to new runway

Move an aircraft to the new runway on the Maestro ladder when a change of runway is assigned.

11.3.4.3 Change runway 15 minutes prior

Change runway assignment at least 15 minutes prior to the ETA_FF to avoid changing the stable sequence.

11.3.5 Information to the Flow

11.3.5.1 Advise the flow

En route must advise the Flow by Maestro coordination message or voice coordination:

a) if other than the assigned runway is required for a specific purpose such as a practice ILS or Autoland;
b) when advised by crews about their PRM capability;
c) when route changes affect the TMA/TCU;
d) where for traffic management an aircraft has been re-cleared via a different FF than planned;
e) of significant weather deviations affecting the sequence;
f) when the re-compute, de-sequence, exchange or remove function will be used; and
g) of other information as specified in LIs.

11.3.6 Information to en route

11.3.6.1 Advise en route

TMA/TCU must advise en route when runway changes are required by voice or Maestro coordination message when the:

a) TMA configuration changes; or
b) Flow changes an assigned runway.

11.3.7 En route responsibility

11.3.7.1 ETA_FF times

Ensure that the ETA_FF times are accurate.

11.3.7.1.1 ETA_FF times and adjustment

Check ETA_FF times and adjust for accuracy 15 minutes prior to the FF.

11.3.7.1.2 Frozen flights

Do not adjust ETA_FF of frozen flights.

11.3.7.2 Manual delay

The first Maestro controller must insert a manual delay of 00 for priority flights (e.g. MEDEVAC, SAR, FFR, HEAD).

11.3.7.2.1 Re-route prior to manual delay

If the priority aircraft will be re-cleared via a different route, complete the re-route prior to inserting the manual delay.

11.3.7.3 PETO removal

Re-route the FDR to remove any PETOs once the aircraft is identified.

11.3.7.3.1 Exception

Do not remove PETOs when the aircraft is subject to a RAM alert.

11.3.7.4 Crossing FF at STA_FF

Unless a high speed descent has been approved, ensure that aircraft cross the FF as close as practical to the STA_FF.

11.3.7.4.1 STA_FF accuracy tolerance

Advise the appropriate TCU EXEC if aircraft are more than one minute early or more than 30 seconds late.

11.3.7.5 Speed control

Unless advised by the Flow, instruct aircraft subject to delay to fly the following speeds from the FF or nominated point until published speeds apply:

a) 250 kt for jets; or
b) As specified in LoA/LI.

11.3.7.6 Separation when STA_FF times are close

If the aircraft have close STA_FF times, and you need to alter the longitudinal spacing for separation, determine the order of landing from the Runway View or information window.

11.3.7.6.1 Order of landing

Same runway	Different runway
The aircraft are ordered with the: a) first aircraft to land as the earliest at the FF; and b) second aircraft sequenced within the runway acceptance rate of the first aircraft.	Consult the Flow

11.3.8 Exchange flight

11.3.8.1 Exchange flight function

Do not apply the exchange flight function until the aircraft is in the frozen, stable or superstable state.

Note: *If not in these states, Maestro sequence errors occur.*

11.3.8.2 Sequence anomalies

Use the exchange flight function to fix sequence anomalies caused by a runway configuration change for an aircraft in a Eurocat hold.

11.3.8.3 Maestro timeline

Swap aircraft positions on the Maestro timeline to reflect the actual sequence.

11.3.9 Feeder fix

11.3.9.1 FF inbound aircraft

Ensure that aircraft have the FF position in the flight plan. Re-route aircraft via the FF point if not planned correctly.

11.3.9.1.1 Exception

This does not apply to priority flights tracking direct.

11.3.10 Coordination messages

11.3.10.1 Sending messages between workstations

You may send messages between workstations using Maestro coordination messages.

11.3.10.2 Coordination message types

General	Flight
These messages: a) are off-line definable text messages; b) can be sent to a particular workstation; or c) broadcast to all workstations.	These messages: a) are off-line definable text messages; b) can be linked to a particular flight; or c) can be sent to all positions based on flight FF.

11.3.10.3 En route TMA coordination

You may coordinate between en route and TMA by using Maestro coordination messages.

11.3.10.3.1 Coordination message use

Specify the use of these messages in LIs.

11.3.10.3.2 Example coordinated messages

Message	Meaning
WX Dev have commenced.	Significant weather deviations which will affect the sequence have commenced.
Standby for configuration change.	Flow is about to reconfigure the landing rate of runway.
Flow Planning in progress - do not use delay times until advised.	Flow is planning a significant change in the TMA which will affect the sequence. En route must not use the Maestro times until advised by voice or coordination message.
Maestro delay times accurate.	Sent after reconfiguration or rate change to indicate the Flow has completed the change and the times are correct.

11.3.10.3.3 Example flight related messages

Message	Meaning
MEDEVAC	(callsign) has upgraded to MEDEVAC
MEDEVAC tracking direct.....	(callsign) has upgraded to MEDEVAC and is tracking direct to.....
Request high speed descent	(callsign) request to Flow for high speed descent

11.3.11 Configuration changes

11.3.11.1 Flow coordination message

The Flow must send a Maestro coordination message prior to a configuration change.

Note: *You will receive this when the configuration changes e.g. 'Standby for configuration change'.*

11.3.11.2 Check and reallocate the runway

Check and manually reallocate the runways if necessary.

Note: *After a configuration change, aircraft that have been manually moved to a different runway to that originally allocated by Maestro may revert to the Maestro preferred runway.*

11.3.11.3 Maestro coordination message

On completion of the configuration change, the Flow must send a Maestro coordination message to indicate that the Maestro times are accurate e.g. 'Maestro delay times accurate'.

11.3.12 Runway changes

11.3.12.1 Immediate runway change

The Flow must send a Maestro coordination message when an immediate runway change is required.

Note: *The Flow may insert a slot on the arrival runway(s) to allow time for the TMA to process existing TMA traffic before the next aircraft enters the TMA airspace.*

11.3.12.2 Time/delay corrections

The Flow must send a Maestro coordination message to all sectors when the Maestro times/delays are correct for the new configuration.

11.3.13 Flow planning

11.3.13.1 Runway change plan

The Flow must reconfigure Maestro to plan runway changes or to adjust the sequence.

11.3.13.2 Flow planning in progress

Before entering the change the Flow must advise by voice or Maestro coordination 'Flow Planning in progress - do not use delay times until advised'.

Note: *This is to avoid incorrect delay times being issued.*

11.3.13.2.1 Time delay accurate message

Do not rely on Maestro data once the above message is received until the Flow advises 'Maestro delay times accurate'.

11.3.13.2.2 Resume sequencing

Resume sequencing based on Maestro times once this message has been received.

11.4 Directed flow

11.4.1 Traffic Management Window (TMW)

11.4.1.1 Use of TMW

Use the TMW for sequence information. Nominate which TMW will be used in LIs/LoA.

11.4.2 Flow controller

11.4.2.1 Flow controller responsibilities

The Flow controller is responsible for:

a) displaying preactive strips unless alternative approval is specified in a LIs/LoA;
b) validating all information in the TMW before placing the strip in the proposed arrival sequence beneath the bar;
c) ensuring an accurate EST is calculated (i.e. natural landing time taking into account the nominated approach). Detail where the time is placed in LIs; and
d) advising the sectors of the runway and approach procedure to be issued.

11.4.3 Flow instructions

11.4.3.1 Using the GLOBAL_OPS_INFO field (GOF)

Enter flow instructions in the GOF of the strip, e.g. L32 F17 or L29\32 F17 (if using the GOF for the EST), where F = Feeder Fix.

Specify in LIs/LoA how information is disseminated when the GOF is not available for use due to other higher priority information.

11.4.3.2 Passing flow instructions

Insert a chevron (<) in the strip after the instruction (e.g. L32 F17<) has been passed to the aircraft.

11.4.3.3 Not issuing flow instructions

Do not issue flow instructions when:

a) the GOF is empty; or
b) there is a question mark after the instruction (e.g. L25 F13?).

Issue instructions when the '?' has been removed.

11.4.3.4 Responsibility for passing instructions

The Flow must ensure all instructions are passed to aircraft. Confirm instructions by voice when:

a) the jurisdiction controller has not issued the instruction after a reasonable time (+1 min after entry); or
b) any issued instruction is amended

11.4.3.5 FF changes

Do not alter jet aircraft Feeder Fix (F) times once they are within 100 NM of their destination except in unusual or unexpected circumstances.

Do not alter turboprop Feeder Fix (F) times once they are within 80 NM of their destination except in unusual or unexpected circumstances.

11.4.4 En route responsibilities

11.4.4.1 Advice to Flow

The Jurisdiction controller must advise the Flow of:

a) any deviations;
b) speed changes;
c) requests for instrument approaches;
d) undue workload that would result from Flow controller instructions; and
e) any actions taken to meter inbound traffic.

11.4.4.2 PETO removal

For ADES subject to FF times, re-route the FDR to remove the PETO once the aircraft is identified.

11.4.4.2.1 Exception

Do not remove PETOs when the aircraft is subject to a RAM alert.

11.4.4.3 FF accuracy tolerance

Advise the appropriate TCU EXEC if aircraft are more than one minute early or more than 30 seconds late.

11.4.4.4 Speeds after delays

Unless advised by the Flow, instruct aircraft to fly the following speeds from the FF or nominated point until published speeds apply:

a) 250 kt for jets; or
b) As specified in LIs/LoA.

This page is intentionally blank

12 Aerodrome control

12.1 Aerodrome control functions

12.1.1 Aircraft, vehicles and pedestrians on runway - frequency procedures

12.1.1.1 Aircraft/vehicles/pedestrians on runway - frequency procedures

Instruct aircraft, vehicles and pedestrians operating on a runway in use or within the runway strip of a runway in use to operate on the appropriate ADC frequency unless:

a) the aircraft/vehicle/pedestrian is crossing a runway in use;
b) a facility failure (console or aircraft/vehicle) requires use of the SMC frequency; or
c) there is an emergency situation that requires use of the SMC frequency.

12.1.2 Start approvals - Class C towers

12.1.2.1 Implementation

Implement start approvals whenever possible if aircraft are likely to queue at the holding points for excessive periods.

12.1.2.1.1 Position responsibility

Allocate start/pushback times to avoid excessive queuing at the holding point, taking into account:

a) time interval from parking position to holding point;
b) airport congestion;
c) balancing departure demand with expected departure capacity; and
d) restrictions associated with en route traffic flow.

12.1.2.1.2 Notification

Notify the TCU and NCC of the implementation of start approvals.

12.1.2.1.3 ATIS information

Broadcast the following when blanket start approvals are required:

Content	Details/phraseology
OPR INFO	START APPROVAL RQ. WHEN READY FOR PUSHBACK OR ENGINE START, CTC (position) ON FREQ (frequency) FOR START TIME.

12.2 Manoeuvring area and circuit operations

12.2.1 Taxi clearances

12.2.1.1 Taxi instructions

Issue taxi instructions progressively to the:

a) departure runway holding point/parking position; or
b) position where a hold short instruction is required.

12.2.1.1.1 Exception

Progressive instructions are not required when:

a) standard taxi routes are published and used; or
b) there is no alternative route. In this case, issue a hold short or departure runway holding point/parking position instruction.

12.2.1.1.2 Examples

'QFA123 TAXI TO HOLDING POINT FOXTROT, RUNWAY 16 RIGHT'

'VOZ123 TAXI TO HOLD SHORT OF GOLF'

'QLK123 TAXI TO HOLD SHORT OF RUNWAY 25'

'QLK300D TAXI TO BAY 14'

12.2.1.1.3 Delayed by traffic

Where an instruction to hold position off the runway has already been issued to an aircraft with previous taxi instructions, you do not need to repeat the instruction on transfer to ADC/reporting ready.

Note: *This does not preclude you from reissuing the instruction if you consider it appropriate.*

12.2.2 Manoeuvring and apron areas

12.2.2.1 Provision of services

Provide maps and diagrams in the tower to delineate between manoeuvring and apron areas.

12.2.2.2 Aerodrome control services on aprons

Establish LoA with affected parties when providing aerodrome control services on aprons.

12.2.2.3 No conditional clearances - Metro D towers

Do **not** issue conditional clearances to aircraft or vehicles for movements affecting a runway in use at Metro D towers.

12.2.3 Workload management of circuit traffic

12.2.3.1 Considerations

Consider the following when assessing the appropriate number of aircraft for circuit operations:

a) Pilot experience (e.g. solo pilots in the circuit versus dual instruction);
b) ATC experience (e.g. newly rated or returning after absence);
c) Factors affecting air/ground communication;
d) Differences in aircraft performance;
e) Environmental factors limiting pilot's ability to see-and-avoid or controller's ability to visually acquire traffic;
f) Requests for non-standard circuit patterns including crossing runway operations;
g) Arriving and departing traffic;
h) Control Zone limitations;
i) Runway capacity; and
j) Any other factors likely to affect the safe operation of the circuit.

12.2.4 Sequencing instructions - Metro D towers

12.2.4.1 Runway designator

Include the runway designator (left, right or centre) with sequencing instructions when parallel runways with contra rotating circuits are in use and aerodrome control is provided from a single ADC position. For example:

'ABC NUMBER TWO FOLLOW THE CESSNA ON BASE RUNWAY LEFT'

'DEF NUMBER ONE RUNWAY CENTRE'.

12.3 Departing aircraft

12.3.1 Transfer of departing aircraft - Surveillance tower

12.3.1.1 Directed transfer

Transfer departing aircraft:

a) when correctly coupled;
b) as soon as possible after becoming airborne; and
c) not later than 2000 FT AGL unless coordinated.

12.3.1.1.1 Exception

Transfer and coupling requirements may be amended by LIs to comply with auto release and local traffic management requirements.

12.4 Arriving aircraft

12.4.1 Restate assigned level

12.4.1.1 Visual approach procedures

Refer to 11.1.1.1 Circuit entry - VSA not assigned.

12.5 Control of manoeuvring area

12.5.1 Runway-in-use lights

Treat the full length of the runway as 'in-use' whenever runway-in-use lights are used to indicate that a particular runway is in use.

12.5.1.1 Indicate in-use/released

Except at INTAS towers, indicate runway status by additional means when runway-in-use/released lights are used.

12.5.2 Runway occupancy displays

12.5.2.1 Runway bay/designator

Use a 'RUNWAY' designator/dedicated bay/panel to indicate occupancy of a runway, unless LIs specify an alternative method.

12.5.2.2 Strip placement

Place the appropriate strip/FDE under/in the 'RUNWAY' designator/bay/panel or on the traffic running sheet when an aircraft/vehicle/pedestrian is cleared to use the runway.

12.5.2.2.1 Traffic running sheet exception

Not applicable for an aircraft cleared to use the runway for landing, lining-up or taking-off when traffic running sheets are used.

Note: *Runway occupancy for aircraft landing, lining-up or taking-off is displayed by annotations specified in 1.5 Flight Data Records - Towers*.*

* For traffic running sheet annotation requirements see 1.5.1.14 Traffic running sheet format.

12.5.2.3 Runway occupied

When a clearance is issued to occupy the runway and/or the runway strip, the controller with jurisdiction of the runway must display the corresponding strip/FDE(s) under/in the runway designator/bay/panel:

a) a vehicle crossing the runway (use 'Runway Crossing' strip/FDE);
b) an aircraft's flight progress strip/FDE is used to indicate runway occupancy;
c) an aircraft crossing the runway (use 'Runway Crossing' strip/FDE if no flight progress strip/FDE);
d) men and hand tools in accordance with the provisions of MATS or MOWP (use 'Men and Hand Tools' strip/FDE); or
e) 'Runway Occupied' for all other operations.

12.5.2.3.1 Runway crossing alternative display

'Runway Occupied' strips may be used in lieu of 'Runway Crossing' strips.

12.5.2.3.2 Exception

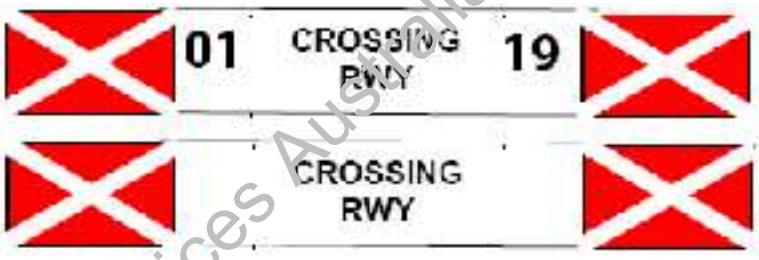
'Runway Crossing' strips are not mandatory at Metro D towers that use traffic running sheets.

12.5.2.3.3 Traffic running sheet alternative

When traffic running sheets are used, display runway occupancy by:

a) annotations specified in 1.5 Flight Data Records - Towers when an aircraft is cleared to line-up, take-off or land on a runway;
b) annotations or physical barriers as specified in local instructions for runway crossings;
c) displaying the 'Men and Hand Tools' strip on the traffic running sheet when men and hand tools are issued with a clearance to occupy the runway strip of a runway in use in accordance with MATS or MOWP;
d) displaying the 'RUNWAY OCCUPIED' strip or facsimile on the traffic running sheet to prevent use of the runway columns, for all other operations issued with a clearance to occupy a runway in use; and
e) displaying a 'RUNWAY OCCUPIED' strip at the SMC position for all operations issued with a clearance to occupy a runway released to SMC.

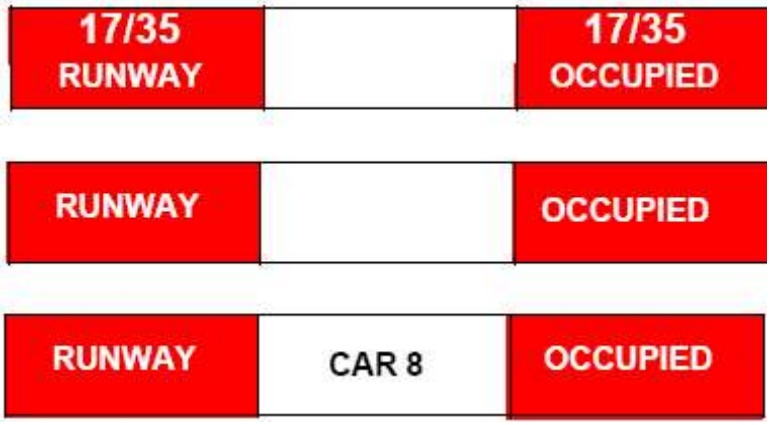
12.5.2.3.4 Runway crossing strips



Note 1: *The strip may also be engraved with the runway identifier.*

Note 2: *Additional use and display requirements for runway crossing strips are specified in LIs.*

12.5.2.3.5 Runway occupied strips



Note 1: *The strip may also be engraved with a vehicle callsign and/or runway identifier.*

Note 2: *Refer Local Adaptation manuals for INTAS towers FDE layout.*

12.5.2.3.6 Distinguish between runways

Use a runway occupied strip/FDE with white stripes to distinguish between runways. For example:

Note: *Refer Local Adaptation manuals for INTAS towers FDE layout.*

12.5.3 Runway status

12.5.3.1 Runway status strips

Display 'Runway In Use' and/or 'Runway Released' strips at aerodromes where runways are released to the SMC.

12.5.3.1.1 Alternative displays

The runway status strips need not be displayed where alternative displays are specified in LIs or at INTAS towers.

12.5.3.1.2 SMC provided by the ADC

'Runway In Use' and/or 'Runway Released' strips are not required at aerodromes when SMC is solely provided by the ADC.

12.5.3.1.3 Runway in use and runway released strips

Display the runway status by one or a combination of the following strips:

12.5.3.1.4 Display requirements (not applicable INTAS towers)

Runway released to SMC:

a) display a green 'Runway Released' strip at the SMC position; and

b) display a red 'Runway Released' strip at the ADC position.

12.5.3.1.5 Runway released to SMC (not applicable INTAS towers)

Use the following display at locations where the runway is released to SMC as the default:

a) Display a green 'Runway Released' strip at the SMC position when the runway is released to the SMC; and

b) When the ADC resumes the runway:

   i) display a red 'Runway In Use' strip at the SMC position; and

   ii) display a green 'Runway In Use' strip at the ADC position.

12.5.3.2 Metro D towers runway status management

At Metro D towers, you may use a green 'Runway' strip in lieu of runway in use and released strips as described above. These towers may also use a red 'Runway In Use' strip to highlight particular operations (e.g. cross wind circuits). Specify display requirements for such operations in LIs.

12.5.3.2.1 Green 'runway' strip

12.5.3.2.2 Display requirements

Specify display requirements for when positions are combined in LIs. For example:

a) SMC - Has jurisdiction of 04L/22R;
b) ADC 2 - Requests use of non-duty 04L/22R for a departure;
c) SMC - Hands ADC 2 Green runway strip for period of use; and
d) ADC 2 - Once departing aircraft is clear of the runway hands green runway strip back to SMC.

12.5.3.2.3 Runway crossing exception

Hand over of the 'runway' strip is not required for crossing of the runway.

12.5.4 Manoeuvring area access

12.5.4.1 Repositioning traffic - SMC

Use a white coloured Repositioning Traffic Strip/FDE (see below) for all movements on the aerodrome manoeuvring area that involve vehicles or aircraft that do not have a paper flight progress strip or a multi use SMC taxi strip.

CALLSIGN	TYP (if applicable)	FROM	TO	RWY Holding Point (if applicable)

Note: *Refer Local Adaptation manuals for INTAS towers FDE layout.*

12.5.4.1.1 Restrictions, exemptions and requirements

Specify any restrictions, exemptions or requirements in LIs.

12.5.5 Multi-use taxi strips format - Class D towers

12.5.5.1 SMC display

Use a multi-use paper strip when an individual flight progress strip or repositioning strip is not used.

12.5.5.2 Outbound/blue strips

Callsign													
DEST	POB												
Hold Pt/RWY	Time												

12.5.5.3 Guidance - outbound

Field	Meaning
Callsign	Aircraft callsign in large print (include aircraft type if required).
DEST	The airfield of next intended landing/destination or area of operation (e.g. training area, circuits etc).
POB	If advised.
RWY/Hold Pt	Annotate any intermediate clearance limit issued and departure RWY.
Time	Time taxiing commenced.

12.5.5.4 Inbound/buff strips

Callsign													
TWY	Hold Pt (if applicable)												
Destination													

12.5.5.5 Guidance - inbound

Field	Meaning
Callsign	Aircraft callsign in large print (include aircraft type if required).
TWY	Where the aircraft vacated the landing RWY and makes initial contact with SMC.
Hold Pt	Annotate any intermediate clearance limits issued (e.g. hold short of a RWY - use TWY designator).
Destination	Notified parking destination on the aerodrome.

12.5.6 Aerodrome works

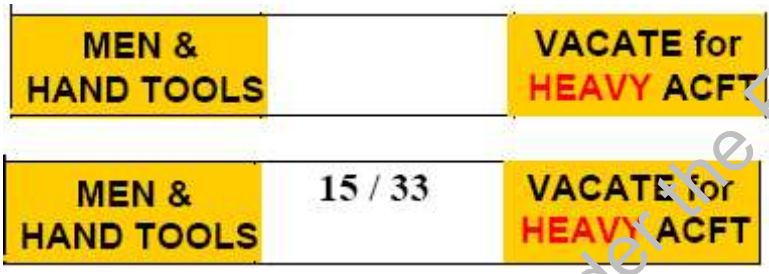
12.5.6.1 Display and coordination

When workers using hand tools are authorised within 23 m of the runway side stripe, or runway edge where no side stripe marking exists:

a) display the 'Men and Hand Tools' strip/FDE in the runway bay/panel or on the traffic running sheet; and
b) advise the OCA holder.

Specify any additional display requirements in LIs.

12.5.6.1.1 Men and hand tools strip



12.6 Low visibility procedures - Metro D towers

12.6.1 Taxiways

12.6.1.1 Separation on taxiways

Provide separation on the taxiways between aircraft, and between aircraft and vehicles, by permitting only one aircraft to use any portion of a taxiway that is not visible to the tower.

12.7 Use of surveillance equipment

12.7.1 Reciprocal runway operations

12.7.1.1 Surveillance separation

Apply surveillance separation for reciprocal runway operations:

a) in accordance with MATS procedure;
b) subject to operational risk assessment; and
c) as published in LIs.

Refer to MATS for information on separation between departing aircraft.

12.7.2 Advanced Surface Movement Guidance System (A-SMGCS)

12.7.2.1 Operating instructions

Operate A-SMGCS in accordance with the A-SMGCS Controller Working Position Display Users Manual (730-022409).

12.7.2.2 A-SMGCS alert generation

A-SMGCS Safety Logic uses two methods to generate alerts:

a) **Time to Threshold (T1 and T2)**: Alerts are generated for an arrival on a single runway, if A-SMGCS detects a target(s) on that runway;

Caution: (T1) 15 seconds from that runway's threshold;

Warning: (T2) 10 seconds from that runway's threshold; and

b) **Target to Target**: Alerts are generated where a collision risk exists between targets.

Note: *Alerts will not be generated between associated vehicles.*

12.7.2.3 Helicopter procedures

Helicopters are recognised from the FDR or by assigning Mode A code 0301 and are not processed by A-SMGCS Safety Logic unless classified as landers.

12.7.2.3.1 Assign code 0301

Only assign Mode A code 0301 to helicopters.

12.7.2.4 Target icon size

A target's icon size is based on the target type as follows:

a) 4 mm circle for wide bodied aircraft; or
b) 3 mm circle for other aircraft.

12.7.2.5 Target icon colour

A-SMGCS target icon colours follow:

a) ARR icons are white;
b) DEP icons are blue (with white label text);
c) UNKNOWN icons are bright orange;
d) VEH icons are magenta; and
e) ADES = ADEP FPL icons are bright green.

12.7.2.6 Labelling

To ensure Mode S transponder equipped aircraft are correctly labelled, when required instruct the aircraft to:

a) SQUAWK NORMAL if there is no label;
b) either recycle or re-enter assigned SSR details if an invalid label is displayed. For example:
   i) M3:extFP/Surv;
   ii) MS (INTAS only); or
   iii) 3A: extFP/Surv; or
c) CHECK C/S ENTRY IN FMS if a CS: extFP/Surv message is displayed.

Note: *INTAS ESS Ground will display the prefix messages MS, 3A and CS, but the extFP/Surv data will be absent.*

12.7.2.7 A-SMGCS instructions

Function	Instruction
Alert Inhibition	A-SMGCS alerts may be inhibited on specific targets on a position by position basis if, in the opinion of the OCA holder, the number of invalid or nuisance alerts is affecting the provision of a safe ATC service. ***Note:*** *Include short term A-SMGCS alert inhibition areas on HO/TO information.*
Arrival Alerts	Ensure Arrival Alerts are selected on.
Audio Alert Test	Test weekly: defined in LIs.
Caution Alert	Caution Alert function acknowledgement not required.
Caution and Warning Alert Response	On receipt of an A-SMGCS Caution or Warning Alert immediately scan aerodrome traffic, including Runway Strip area, to assess the integrity of the alert. If required, choose the appropriate action(s) from the following list to resolve the situation: a) Traffic information; b) Control instructions; and c) Safety Alert.
Track Alert Inhib	OCA holder approves Track Alert Inhib.
Audio Volume	See unit LIs.
Bearing True/Magnetic	Set to Magnetic.
Cursor State	Set to Never Hide.
Cursor Display	Set to Lat/Long.
Cursor Speed	System set to default 3 with a range of 3 to 6.
Data Blocks	Select Data Blocks on. Data Block font is 8 Verdana.
Data Block Content	Minimum Data Block content is ACID/Vehicle Identification.
Hide Data	Do not select Hide Data function.
QNH Failure	Authorised technical personnel advise TWR when to manually input QNH.
Route Monitor	Do not select the Taxiway Route Monitoring function.
SMR Raw Video	Function selection defined in LIs.
Target Icons	Target Icon is based on the centre of the return or the transponder antenna and does not represent the target's actual size and/or actual position. The Target Icon is within the required specification for position accuracy.
Preference Sets	Select a CWP Preference Set as appropriate to the control position or as described in LIs. Individual Controller Preference Sets are not permitted.
Close/Open Runway	Selected by OCA holder. Included in HO/TO information.

Function	Instruction
Label De-Conflict	If selected for temporary period, ensure it is de-selected when no longer required.
Labelling	Manually label unknown tracks workload permitting.
Maintenance State	Do not place a CWP into Maintenance State unless directed to do so by authorised technical personnel.
RWY Configuration	**All** is default RWY configuration. Variations must be approved by OCA holder and recorded on HO/TO.
Special Beacon Codes (SSR Emergency Codes)	For Special Beacon Codes (SSR Emergency Codes): a) the audio alarm is permanently silenced; and b) visual alerts are displayed.
Temporary Data	The OCA holder approves temporary data changes and records advice on HO/TO.
Track Management	Coverage is default track management configuration. Define variations in LIs.

12.7.2.8 VeeLo address master list

The VeeLo Address Master list captures all VeeLo codes for A-SMGCS equipped airports.

To access this data, refer to Section 4 References in the VeeLo Configuration Data Airways Engineering Instruction (2.2325), and select the link to the Excel Spreadsheet - VeeLo Addresses details.

12.7.3 Tower Situational Awareness Display (TSAD) procedures

12.7.3.1 TSAD User Manual

Refer to the Tower Situational Awareness Display (TSAD) User Manual (MAN-694) for user information on how TSAD functions operate.

Note: *The TSAD system is listed on the Part 171 Operating Schedule as an Airways System for ATC data processing and display.*

12.7.3.2 Data management

Submit changes to TSAD data through the NRFC process.

Note 1: *TSAD data is managed by the Brisbane or Melbourne Airways Data Team.*

Note 2: *The lateral display limits for TSAD is tower specific and defined as part of data management.*

12.7.3.3 Limitations

At sites that receive data via a single ADIN-C network connection, only use TSAD/ ESS as an aid to situational awareness.

Note 1: *Refer to MATS Chapter 12.9 Use of surveillance equipment 'Tower Situational Awareness Display (TSAD)'.*

Note 2: *These sites have system latency issues that place limitations on the use of TSAD.*

12.7.3.3.1 Use of TSAD for surveillance services exceptions

Refer to 12.7.4 Use of TSAD for surveillance services for TSAD systems approved for the provision of ATS surveillance services.

12.7.3.4 RESET and ON/OFF switches

Use the RESET switch on the computer to restart the system if it freezes or fails to respond to keyboard inputs. This will provide the necessary restart in most cases and is preferred from a technical viewpoint. If the RESET does not restart the program then select the ON/OFF switch, wait 10 seconds and reselect the ON/OFF switch.

Note: *The computer should automatically reload the TSAD application.*

12.7.3.4.1 RESET switch inaccessible

Report as a fault to the Service Desk Airways if the TSAD PC or the RESET switch is not accessible.

Note: *At some locations the TSAD PC is installed remotely and not accessible to controllers.*

12.7.3.5 Emergency code indications

Eurocat units must advise applicable towers on observing the symbol/visual - aural alarm associated with an SSR emergency code selected by an aircraft operating or about to operate within the tower's area of responsibility.

Note: *TSAD provides a visual indication only of an emergency mode transmission (EMG, HIJ, RAD and LNK). The emergency mode transmission will alarm (aural and visual) in Eurocat.*

12.7.3.6 SSR code allocation

You may issue code 0100 without coordination with the adjacent radar sector. Do not issue other codes unless authorised.

12.7.3.7 SSR setting

SSR ALL should normally be selected OFF, but may be selected ON to reduce label clutter.

12.7.3.8 Location specific information

Detail location specific TSAD information in LIs.

12.7.3.9 Data replay

Use Eurocat data records where a replay is required.

Note: *The TSAD system (including ESS TSAD) is not recorded.*

12.7.4 Use of TSAD for surveillance services

12.7.4.1 Use of TSAD for ATS Surveillance System Separation

You may use the TSAD display to provide ATS surveillance system separation services in accordance with MATS Chapter 12.9.1 'Surveillance equipment and aerodrome control':

a) at Essendon; and
b) in bypass mode at Canberra and Gold Coast.

12.7.4.1.1 Degraded mode operations

Specify procedures related to the use of the bypass radar display (degraded mode operations) in unit Local Instructions.

12.7.4.2 Melbourne, Perth, Brisbane, Cairns and Adelaide Towers

During degraded mode operations, you may use the TSAD display in accordance with MATS Chapter 12.9.3 'Tower Situational Awareness Display (TSAD)'.

Note 1: *These sites are not approved to use TSAD to provide ATS surveillance system separation.*

Note 2: *At these sites TSAD is a contingency system, providing backup to the primary and secondary INTAS ESS displays.*

12.8 Operation of aerodrome lighting

12.8.1 Aerodrome lighting

12.8.1.1 Fault reporting

Report aerodrome lighting faults to the Service Desk, Airways to ensure that fault and safety data is correctly tracked.

12.8.1.1.1 Single light globe failure

Provided the operational status of the facility is not affected, failure of a single light globe does not require a fault report and may be reported directly to the aerodrome operator.

12.8.1.1.2 Reporting criteria

Publish procedures for the tower to notify the aerodrome operator of aerodrome lighting faults in LIs.

Note 1: *Reporting criteria for aerodrome lighting outage is located in CASA MOS Part 139, Aerodromes, Chapter 9.*

Note 2: *This reporting is in addition to notifying the Service Desk, Airways.*

12.8.1.2 Test operation of Pilot Activated Lighting (PAL)

Test the operation of the PAL system using the tower handheld radio at non-continuous towers at, or prior to, tower close. Testing is not required when:

a) the tower selection of the 'TWR OFF' button automatically switches the PAL system lights on; or
b) the PAL is connected to photoelectric cells and the tower closes before last light.

12.8.1.2.1 Exception

Not applicable to INTAS towers.

12.8.1.2.2 Journal results of tests

Record the results of a PAL activation test in the AOJ. If the test is part of the daily closing procedures listed in LIs, then 'Tower Closed, checks complete' meets the AOJ entry requirement.

12.9 Obstructions

12.9.1 Birds

12.9.1.1 Advise presence of birds or carcasses

On becoming aware of the presence of birds or bird carcass(es) on or in the vicinity of the runway(s) in use or associated runway strip(s), in numbers or of a size likely to be a hazard to aircraft operations, advise:

a) the aerodrome proprietor or delegate; and
b) affected pilots.

12.9.1.2 Foreign object debris

When made aware of the finding of any object which may have fallen from an aircraft, or that a birdstrike may have occurred:

a) attempt to determine which aircraft may have been involved; and
b) advise the pilot and/or company involved.

12.9.1.3 Only notify, do not instruct

Do not instruct the aerodrome proprietor or delegate to take any action with regard to birds or bird carcass(es).

12.10 Aerodrome inspection and serviceability

12.10.1 Contact arrangements

12.10.1.1 Contact details for NOTAM

Ensure that aerodrome operator contact details for both normal and out-of-hours duty are available.

Note 1: *The aerodrome operator is responsible for the inspection and serviceability of an aerodrome. These responsibilities may be delegated to the Aerodrome Reporting Officer(s).*

Note 2: *The aerodrome operator is responsible for NOTAM action with respect to aerodrome serviceability.*

12.11 INTAS procedures

12.11.1 Workflow

12.11.1.1 Follow adaptation workflows

Follow adaptation workflows except where variance is required for operational reasons.

12.11.1.2 Use caps lock

Ensure caps lock is selected when entering data from the hard keyboard.

12.11.1.3 RETURN function

Ensure that the RETURN function is used for:

a) all flights where ADEP=ADES; and
b) all LOCAL instrument training flights to ensure correct message processing and availability of FDEs. When a LOCAL FDE is no longer required (e.g. final PIA), BIN the FDE.

12.11.1.4 Eurocat sourced FDE management

FDEs that are sourced via Eurocat and in the planned state will be deleted from the 'planned' panel without controller interaction. FDEs in other panels will present a VALIDATION message to the controller. Upon acknowledgement of a CNL from Eurocat, the FDE will be deleted from the panel at a VSP.

12.11.1.5 Route field amendment

Carry out the following steps when you receive a RTE validation message for an FDE to ensure correct SID 2 field data (Track In/Out):

Departure FDE	Arrival FDE
1) Open 'Departure Instructions' pop up; 2) Select 'Delete Track Out' button; 3) SID 2 will now update with amended route; 4) 'Close' 'Departure Instructions' pop up; and 5) 'Track Out' will populate with amended route.	1) Open 'Arrival Instructions' pop up; 2) Select 'Track In' window; 3) Delete 'Track In' using backspace key; 4) Close 'Arrival Instructions' window; and 5) 'Track In' will populate with amended route.

Note: *SID 2 will automatically update for FDEs in the Planned state.*

12.11.1.5.1 Confirmation of SID 2 field

For ADEP=ADES flights, confirm SID 2 displayed data against Field 15 route information.

Note: *ADEP=ADES FDE SID 2*

Where an FDE is ADEP=ADES, the SID 2 route extraction may not necessarily be correct. SID 2 extraction works on a hierarchy, if Field 15 (route) has two defined route extractions, the route with the higher priority will show for both the outbound and inbound legs. This can mean that either the outbound or inbound SID 2 field may be incorrect.

12.11.2 Runway/active panels

12.11.2.1 Size panel to show all FDEs

Size the 'Runway' panel to ensure that all FDEs are shown and no scroll bar is evident.

12.11.2.2 Placement of FDE-runway panel

Adaptation will place the FDE at the top of the runway panel (excluding Runway Crossing FDEs). The bottom of the runway panel indicates the FDE that has unrestricted or first use of the runway.

12.11.2.3 Placement of FDE-active panel

Adaptation will place the departure FDE at the bottom of the active panel, and arrivals at the top. Use 'manual sort' for further changes within the panel.

12.11.3 Levels

12.11.3.1 Limit block level use to when operationally required

Do not issue block levels:

a) unless requested by an aircraft and operationally required; or
b) to an aircraft that will affect a Eurocat sector unless the level has been voice coordinated (INTAS cannot send block levels to Eurocat).

12.11.3.1.1 FDE indications

When a block level is required:

a) select 'block';
b) insert upper level in XFL; and
c) insert lower level in CFL.

12.11.4 Instrument approaches

12.11.4.1 FDE indications

Enter the applicable Initial Approach Point name in the track field if required.

12.11.4.2 Practice instrument approaches (PIA)

For all PIAs (that are not landing off of the approach), ensure the FDE is converted to a 'LOCAL' for the PIA, and then the applicable FDE type for the next portion of the flight.

Note: *This ensures correct charging events are captured automatically.*

12.11.5 Coordination

12.11.5.1 Field 18 Changes to FDE

Make additions to the NAV or COM fields through the Flight Plan window or Clearance pop up. Make additions to RMK or STS through the Clearance (Voice or PDC) pop up.

Contact the FDC to delete RMK/STS/NAV or COM data to ensure the change is not rejected by Eurocat.

Contact the FDC to modify or delete any Field 18 data that is contained in the "OTHER" window in the Flight Plan, to ensure the change is not rejected by Eurocat.

Note: *Any changes made through the 'OTHER' field of the Flight pop up will not be transmitted to Eurocat, which can lead to Eurocat FDR's not being coordinated.*

12.11.5.2 FMF messages

Action FMF messages via the Clearance Pop UP, and delete upon action completion.

Note: *This deletion will be sent to Eurocat.*

12.11.5.3 Voice coordinate FDE changes

Voice coordinate with the applicable Eurocat unit when:

a) an LRM validation message is received on a FDE; or
b) a change to the FDE may affect Eurocat units after taxi.

Note: *Changes to the FDR are not highlighted to the Eurocat controller.*

12.11.5.4 Voice coordinate departure FDE changes

Voice coordinate changes to the FDE that may affect Eurocat sectors after taxi.

Note: *Changes to the FDR are not highlighted to the Eurocat controller.*

12.11.5.5 RETURN function/hidden FDEs

When RETURN is selected on a local FDE, it will appear in the active panel.

Note: *This is due to the VSP added to the ETA.*

Access the FDE for longer duration flights (e.g. Customs), via the activate window.

12.11.6 Role changing (INTAS)

12.11.6.1 Changing roles (Harris Voice Switch)

Use the following procedure when changing roles from one INTAS workstation to another:

Step	Action
1	Controller handing over shall negotiate with controller taking over regarding handover of responsibility. Controller handing over shall maintain responsibility during briefing (via intercom). If combining/ decombining roles deselect ARG.
2	The controller taking over must select the applicable role but not interact with it until assuming responsibility.
3	Relinquishing controller ensures all cold/hot lines are deselected, then selects 'MAINT Role'. Accepting controller reselects ARG if applicable.

12.11.6.2 Workstations not in use

Select 'MAINT Role' for all workstations not in use. With OCA approval a workstation not in use may have a role selected to assist with traffic management/software workarounds.

Note: *The crash alarm does not work when a workstation is in 'MAINT Role'.*

12.11.6.2.1 Workstations - non-continuous towers

Leave one workstation in **combined** role when closing non-continuous towers.

12.11.6.2.2 FDE manipulation

Unless specified in Local Procedures, do not interact with a workstation or FDE under the jurisdiction of another controller.

12.11.6.2.3 Coordination

All coordination for manipulation of an FDE or workstation must be completed over a cold line or hot line as appropriate.

12.11.7 Handover/takeover

12.11.7.1 Voice record HO/TO (Harris Voice Switch)

Select 'BRIEF' on VCCS to record HO/TO. Deselect 'BRIEF' when the HO/TO is completed.

12.11.8 INTAS system requirements

12.11.8.1 Displays

Define INTAS displays in LIs screen display setup.

12.11.8.2 Windows functions

Do not select any windows operating functions including 'X' windows close.

12.11.8.3 ESS/SMSS

Do not select:

a) File - Exit; or
b) Altitude Filter.

12.11.8.4 Fused display (SMSS)

False stop bar alerts may occur during MLAT failures due to track jumps.

12.11.8.5 Big TED (Harris Voice Switch)

Display Big TED for all ROLE changes and at other times when required.

12.11.8.6 Crash alarm checks

Test all hard wired Crash alarm buttons as defined in LIs. Ensure the correct indication on 'Crash' button and on the CDM for workstations in use.

12.11.8.7 Ensure DATIS data is correct

Check that uploaded data from either METAR or AWS into DATIS is correct. Enter windshear information under SIGWX.

Note: *The vocabulary may not expand correctly and may require manual editing to ensure correct broadcast.*

12.11.8.8 Bypass PAC (Harris Voice Switch)

Use the supervisor handset to connect to the jacks when Bypass PAC is required.

12.11.8.9 VCCS (Harris Voice Switch)

If Big TED indicates that both TX and RX are deselected, reselect both the TX and RX to enable audio at the workstation.

Note 1: *This is indicated by squares changing to circles on Big TED.*

Only monitor other positions when operationally required. Do not monitor for long periods.

Note 2: *When operating in a combined ROLE, with ARG ON, and if the TX or RX button is selected, it will deselect both TX and RX at that workstation. This is indicated on Big TED by the buttons becoming squares instead of circles. If there is another role open with these frequencies there will be no unattended radio alarms presented to the controller.*

This page is intentionally blank

14 Systems

14.1 Eurocat display requirements

14.1.1 AIF notification

14.1.1.1 AIF message displays

Display the command line on tower displays designated for receiving AIF messages.

14.1.2 Scale marker

14.1.2.1 Scale marker display

Display the scale marker at positions providing ATS surveillance system services.

14.1.2.2 Scale marker not required

A scale marker is not required when operating a TWR/TCU position:

a) on a range scale not exceeding 100 NM; and
b) a map showing detailed distance information is displayed.

14.1.3 ADS-B selection in the GIW

14.1.3.1 ADS-B in GIW

Select ADS-B on at en route positions.

Note: *ADS-B data is not displayed at TCU or TWR positions.*

14.1.4 Flight Plan Air Situational Display (FPASD)

14.1.4.1 FPASD function

Select the FPASD function on at:

a) en route positions; and
b) terminal area positions providing services to, or receiving coordination on, aircraft outside surveillance coverage.

14.1.5 Changes to GRIB wind

14.1.5.1 Spot wind advice

Advise the SS of the spot wind when a pilot advises a spot wind indicating a difference:

a) between the actual wind and the GRIB wind forecast of 40 knots or greater; or
b) in direction of 45 degrees or greater (providing the wind speed is at least 40 knots).

14.1.5.1.1 Notify BoM

The SS must notify the BoM of the spot wind.

14.1.5.2 Modifying the GRIB wind model

The GRIB wind model may only be modified:

a) by the SS; and
b) following receipt of a BoM World Area Forecast (WAF) alert.

14.1.5.3 Request for resend

Request a resend of GRIB data from the BoM using the phrase:

'REQUEST THE DOWNLOAD OF GRIB TO MIS 02 OUTGOING LINK. DOWNLOAD THE GRIB OF XXZ SERIES.'

14.1.6 System maps

14.1.6.1 System map default settings

Define default settings for display/maps/windows at each operating position in LIs. You may only modify the default settings for system map positions 19 and 20 if authorised in LIs.

14.1.6.1.1 Selection in lieu

Specify in LIs which system maps may be selected in lieu of the default map.

14.1.6.2 System map changes

Only change the default system maps when operationally required.

14.1.6.2.1 Return settings

Return to the settings in LIs when no longer operationally required.

14.1.7 Approach path monitoring

14.1.7.1 Do not use approach path monitoring

Do not use approach path monitoring. Select it off at the relevant Supervisor console.

14.1.8 ASD

14.1.8.1 Display entire airspace

Display the entire airspace for which you are responsible except when zooming or focusing on a particular area of the ASD.

14.1.8.1.1 Exception

Where this is not practical due to airspace size or shape, specify in LIs the minimum airspace display requirements for individual sectors.

14.1.8.2 Adequate range scale

Use an adequate range scale to allow air traffic to be managed.

14.1.8.3 Do not use weather maps

Do not display weather maps.

14.1.9 Supplementary ASD

14.1.9.1 Use of supplementary ASD

Use a supplementary ASD provided:

a) LIs specify the conditions for use; and
b) it is not used for vectoring.

14.1.9.2 OSM authorisation

The OSM may authorise use of the supplementary ASD to monitor:

a) a longitudinal separation standard between aircraft on the same identical track;
b) aircraft subject to an IFE; and
c) for other uses approved by the Area & Approach Service Advisor.

14.1.10 Coordination window

14.1.10.1 Use of coordination window (CDN)

Only use the coordination window for coordinating or amending Eurocat data when specified in LIs.

14.1.11 RMAP and DAIW

14.1.11.1 Display

Display restricted maps and DAIW maps when the associated area is active.

14.1.11.2 Amending DAIW levels

Supervisors may amend DAIW levels for a temporary airspace release if:

a) the temporary release will conclude with the airspace deactivating by NOTAM or in accordance with DAH; or
b) nuisance alerts are distracting controller(s) from operational task(s).

14.1.12 Temporary Danger Area Warning (TDAW)

14.1.12.1 Alert integrity

On receipt of a TDAW alert, assess its integrity.

14.1.12.1.1 Safety alert

Issue a safety alert if the warning is valid.

14.1.12.2 TDAW area creation

Create a TDAW area when:

a) a cylindrical Prohibited, Restricted or Danger Area is published at short notice and not depicted as an RMAP or DAIW; or
b) alerting is required should the area be infringed by an ATS surveillance system position symbol.

14.1.12.2.1 TDAW area deletion

Delete the TDAW area when no longer required.

14.1.13 System runways

14.1.13.1 System departure runway selection

The default system departure runway is '00'. Tower must select the DRWY at clearance issue and amend it when necessary.

14.1.13.1.1 Exception

System departure runway selection may be varied by LIs:

a) when auto release procedures are available on only one runway at a given time;
b) when the DRWY is manually selected for all PREActive FDRs where a clearance has been issued prior to changing the system departure runway;
c) when the OSM approves a variation to system departure runway selection supported by a valid safety argument; or
d) at INTAS towers.

14.1.13.2 System arrival runway selection (excluding INTAS towers)

Select the system arrival runway when issuing arrival instructions to that runway.

14.2 Eurocat tools

14.2.1 General

14.2.1.1 Eurocat tools

Do not interact with Eurocat tools unless competent to do so.

14.2.1.2 ATS surveillance system position symbols

Select velocity vectors and/or history dots for ATS surveillance system position symbols.

14.2.2 Using the Bearing and Range Line (BRL)

14.2.2.1 Establish/monitor horizontal separation

Use the BRL to establish and/or monitor horizontal separation between ATS surveillance system or ADS-C position symbols, or display procedural navigation tolerances, provided the ASD range does not exceed 3500 NM.

14.2.2.2 Two degree correction

Apply a two degree correction to the displayed angle when using a BRL to:

a) measure angular displacement; or
b) display an angular navigation tolerance for separation.

14.2.2.3 Display range

Use the smallest practical ASD range when positioning a BRL.

14.2.2.4 Angle measurement

Measure an angle using the BRL displayed bearing of the nominal route and not the AIP MAP published bearing.

14.2.2.5 Great circle tracks

Do not use the BRL to approximate great circle tracks.

Note: *The BRL indicates a straight line between two points and does not approximate great circle tracks.*

14.2.2.6 Time-based separation standard

Use the time interval displayed by the BRL to establish a time-based separation standard when aircraft are displayed as:

a) surveillance or ADS-C position symbols; or
b) flight plan position symbols with FDRs containing ATO(s) and PETO(s) set for reporting point(s) along the affected route segment(s).

14.2.3 Short Route Probe (SRP)

14.2.3.1 SRP selection

Select the SRP for position symbols:

a) outside ATS surveillance system coverage; or
b) not identified at en route positions.

14.2.3.2 SRP display requirements

Specify in LIs where SRPs do not need to be displayed.

14.2.3.3 SRP use

If you cannot display a buffer zone around your airspace select an extended SRP to reflect coordination requirements.

14.2.4 Time separation using SRP

14.2.4.1 SRP use for longitudinal time separation

When using a SRP to establish and monitor a longitudinal time separation standard between two position symbols displayed on the ASD:

a) the following aircraft's SRP must equal the time standard being established or monitored;
b) display the SRP throughout the application of the standard;
c) the two aircraft must proceed on the same track;
d) the following aircraft's SRP must not:
    i) touch the leading aircraft's position symbol or SRP; or
    ii) overlap the relative position of the leading aircraft's position symbol for aircraft on converging or diverging route segments; and
e) flight plan position symbols must have an FDR containing:
    i) valid ATOs; and
    ii) PETOs for the reporting points along the affected route segment(s).

14.2.4.2 Validity of standard

If doubt about the validity of the standard exists:

a) use another method to establish and monitor the standard; or
b) apply another separation standard.

14.2.4.3 Do not use SRP

Do not use the SRP to establish an opposite direction time separation standard for aircraft on reciprocal tracks.

14.2.4.4 T8 SRP use

When using a SRP to establish and monitor the T8 time separation standard between two position symbols displayed on the ASD:

a) display a 15 minute SRP for the second aircraft to cross the intersection;
b) display the 15 minute SRP throughout the application of the standard;
c) the second aircraft's SRP must not touch any part of the first aircraft's position symbol or SRP; and
d) flight plan position symbols must have an FDR containing:
    i) valid ATOs; and
    ii) PETOs set for the reporting points prior to, at and following the intersection of the crossing routes during the application of the standard.

14.2.5 Display options for lateral separation

14.2.5.1 System map

Use a system map to display lateral separation points provided that:

a) diagrams are approved by the SVM; and
b) the system map displays only lateral separation points and associated text.

14.2.5.2 Private map

Use a private map or the Lat/Long function to display lateral separation points (not navigational tolerances) for a specific conflict provided:

a) a buffer of at least 5 NM is added to the safe side of the conflict before you mark the position;
b) the ASD range does not exceed 150 NM or the smallest practical range needed to draw the lateral separation point; and
c) you delete the map or Lat/Long(s) as soon as the conflict is resolved.

14.2.5.3 Supervisor map (defined by operator)

Use a supervisor map where system maps cannot be drawn due to late notice airspace promulgation and there is an urgent requirement for the map to allow safe and efficient operations to continue.

You may use a supervisor map to apply ATS surveillance system separation when:

a) the map is drawn using the smallest practical ASD range;
b) the map is checked for accuracy by another ORM, SS or SM;
c) you add a 1 NM buffer before you apply MATS separation if the Eurocat Lat/Long, BRL, private and supervisor map functions are used to create the map; and
d) you add a 5 NM buffer before you apply MATS separation if the map is drawn to align to a geographical feature.

14.2.5.4 Aircraft considered clear

Without calculating the relevant exit times for each aircraft, consider an aircraft clear of an area of conflict:

a) following a report from the aircraft positively fixing its position clear of the area;
b) by drawing a BRL from the position symbol back to the marked exit point and waiting until the displayed time interval to that point is half the applicable longitudinal time standard or greater; or
c) when the distance from the marked exit point to the position symbol, when visually compared against its timed based SRP, is greater than half the applicable longitudinal time separation standard.

14.2.5.4.1 Aircraft not clear of area of conflict

Do not consider an aircraft clear of an area of conflict solely because the observed Flight Plan position symbol has passed the marked exit point.

14.2.6 Using two flight plan position symbols

14.2.6.1 Solving lateral separation conflicts

Use the information displayed on the ASD to solve a lateral separation conflict by ensuring the aircraft are vertically separated prior to the second aircraft's SRP touching the area of conflict entry point marker.

14.2.6.1.1 SRP value

The SRP value must indicate at least half the applicable longitudinal time separation standard.

14.2.7 Lateral Conflict Tool (LATC)

14.2.7.1 LATC use

Use a displayed LATC area for separation only between the aircraft to which it refers.

14.2.7.1.1 Crosstrack tolerances

You may use crosstrack tolerances with the LATC due to the conservative CEP method of calculation.

Note: *The LATC displays the lateral conflict area between two selected aircraft based on a CEP route calculation.*

14.2.7.2 LATC displayed distances - CEP tolerance aircraft

Use the displayed distances as entry and exit points when pilot derived distances are SCNS based.

14.2.7.3 LATC displayed distances - crosstrack tolerance aircraft

For aircraft with crosstrack tolerances use the displayed distances as Basic Lateral Separation Points (BLSP) and apply the requirements of MATS Chapter 10.4 Lateral to establish entry and exit points.

14.2.7.3.1 Additional buffers not required

When separating an ATS surveillance system position symbol from the crosstrack tolerances of another aircraft, the buffer specified in MATS Chapter 10.4 Lateral, Surveillance position symbol, is not required.

14.2.7.4 LATC displayed times

Set valid ATOs and PETOs when using the LATC tool to determine a lateral time based separation standard.

Use the displayed times as estimates for the BLSP and apply the requirements of MATS Chapter 10.4 Lateral to establish entry and exit points.

Note: *The displayed BLSP estimates are a snapshot using current FDR information. Updates to system estimates may cause the estimates for the BLSP to change without updating the displayed estimates.*

14.2.7.5 Anti-chronological events

Following an anti-chronological event, only use the LATC to assess conflicts occurring ahead of both aircraft.

Note: *Anti-chronology occurs when the logical sequence of time between positions in an FDR is corrupted due to a system update (e.g. following a DPR). A warning message is displayed when an anti-chronological event exists between the present position and up to 40 minutes behind either aircraft.*

14.2.7.6 LATC distance value

Use a LATC value equal to or greater than:

a) the independent navigation tolerance applicable to each aircraft plus the 1 NM lateral separation standard;
b) the dependent navigation tolerance used between an aircraft pair; or
c) the ATS surveillance system separation standard applicable to an aircraft remaining identified for the duration of the procedure plus the independent navigation tolerance applicable to a non-surveillance aircraft.

Note: *See MATS Chapter 10.4 Lateral for dependent and independent tolerances.*

14.2.7.7 Weather deviations

Add any weather deviations when calculating the LATC value. For example:

For two RNAV5 approved aircraft, both deviating 10 NM due weather, plus the 1 NM lateral separation standard (14+14+10+10+1 = 49 NM) use the LATC value of 50.

14.2.7.8 System values

Values for use with the LATC include:

LATC value	Possible scenarios
15	7 CEP vs 7 CEP
22	7 CEP vs 14 CEP
29	14 CEP vs 14 CEP (CTA)
30	RNP4 vs RNP4 (OCA)
31	15 crosstrack vs 15 crosstrack
38	7 CEP vs 30 crosstrack
45	14 CEP vs 30 crosstrack
50	RNP10/RNAV10 vs RNAV10 (OCA)
61	30 crosstrack vs 30 crosstrack
75	
76	
90	
101	50 crosstrack vs 50 crosstrack
151	
Note: *The same sector group can only display one of 29, 30 or 31.*	

14.2.7.8.1 Available LATC values

Groups may display only the values relevant to them to reduce the possibility of incorrect value selection.

14.2.7.9 Additional LATC values

Specify additional approved values in LIs.

14.2.8 Estimated time of passing (TOP) function

14.2.8.1 Passing time calculation

Calculate a passing time immediately prior to issuing an instruction to an aircraft when using the TOP function to apply a separation standard.

14.2.8.1.1 Recalculating passing time

Recalculate the passing time at sufficient intervals to ensure the required separation standard will be maintained.

Note: *The displayed estimate for the TOP is a snapshot using current FDR information. Updates to system estimates may cause the estimate for the TOP to change without updating the displayed estimate.*

14.2.9 Track Angle Calculator

14.2.9.1 Uses

Use the Track Angle Calculator to determine:

a) whether same/reciprocal or crossing routes exist when:
   i) aircraft are operating on non-published routes; or
   ii) the angular displacement between routes cannot be determined by another method; or
b) lateral separation between crossing routes when:
   i) published lateral separation points do not exist; or
   ii) the angular displacement between routes cannot be determined by another method.

14.2.9.2 Usage

When using the Track Angle Calculator ensure the:

a) ASD range does not exceed 100 NM; and
b) angular displacement between routes is 25 degrees or greater.

14.2.9.2.1 Rounding down fractional results

Round any fractional results down to the next whole degree.

14.2.9.2.2 Applying to a lateral separation table

Subtract five degrees from the calculated result if applying the angle to a lateral separation table.

14.2.10 Last known position display (LST)

14.2.10.1 LST button

Use the LST button to toggle the display of the last:

a) known radar position symbol;
b) known ADS-B position symbol; and
c) reported ADS-C position symbol.

Note 1: *The LST symbol is accompanied by the aircraft's callsign.*

Note 2: *LST positions are limited to Jurisdiction and Handover-Out aircraft controlled at the physical position. LST position symbols are not available for non-jurisdiction aircraft and are not transferred following re-sectorisation.*

14.2.10.2 Separation

Use an aircraft's LST position for separation in accordance with MATS.

14.2.11 Incorrect ADS-B planning and indications

14.2.11.1 CIRRIS reporting for non-ADS-B equipped aircraft

Submit an ATS Occurrence report when an aircraft has incorrectly planned as ADS-B equipped.

Note 1: *Eurocat labels for aircraft without B1 or B2 in Field 10b display a 'n' to indicate that the aircraft is non-ADS-B equipped. There is no HMI indication for a flight that has incorrectly planned as ADS-B equipped.*

Note 2: *The non-ADS-B indication in the label is displayed in the following HMI display states:*

a) Handover In;
b) Handover Out;
c) Jurisdiction;
d) Announced;
e) Forced/Informed; and
f) Suspended.

14.2.12 RNAVCAP field

14.2.12.1 RNAVCAP values

When Fields 10 and 18 of a flight plan have the appropriate codes entered, the RNAVCAP value on an aircraft label will display the following:

RNAVCAP	Field 10	Field 18/PBN	Field 18/NAV
A (All)	G + R (+Z)	A1 (RNAV10 or RNP10) or L1 (RNP4)	RNP2
2	G (+Z)	-	RNP2
4	G + R	L1 (RNP4)	-
5	G + R + I	B1 (RNAV5)	-
5	G + R	B2 (RNAV5)	-
5	R + I	B5 (RNAV5)	-
T	R	A1 (RNAV10 or RNP10)	-
Z (Zero)	No area nav capability	No area nav capability	No area nav capability

Note: *Field 10 values shown in brackets are not required for display of RNAVCAP values, but should be present in the flight plan.*

14.2.12.2 RNAVCAP highlight

LIs may specify which sectors display the RNAVCAP highlight to indicate a lack of equipment.

14.2.13 Flight Plan Safety Net Alert (FPSNA)

14.2.13.1 Specify in local instructions

Specify in LIs which sectors use FPSNA.

Note: *FPSNA uses a subset of the Eurocat Flight Plan Conflict Function (FPCF).*

14.2.13.2 FPCF limitations

FPCF will:

a) truncate conflicts that occur at active FPCA vertical and horizontal boundaries;
b) not detect conflicts for aircraft where no FDR exists within the relevant FDRG;
c) not display conflict notifications and FPCWs occurring outside of active FPCAs; and
d) only display conflict notifications at logical positions where FPCF is enabled.

Note 1: *FPCF detects conflicts using a combination of FDP information, off line defined data and aircraft equipage from the ATS flight plan. For each detected conflict pair, FPCF displays the portions of the FDR route for the period during which separation does not exist. See 14.2.15 FPCF tolerances and text values.*

Note 2: *FPCF does not display accurate conflict information for aircraft subject to Eurocat alerts.*

14.2.13.3 Sector Conflict Window (SCW)

Ensure the SCW is always visible.

Note: *The SCW can be hidden behind other windows.*

14.2.13.4 Trial Probe and Current Probe

A unit may use the Trial Probe and Current Probe provided:

a) the SVM authorises the application; and
b) LIs specify which sectors are eligible for their use.

14.2.14 Using FPSNA

14.2.14.1 Workflow for assessing conflicts

Use the following workflow on FPSNA-enabled sectors:

1) Scan the SCW for new conflict notifications;
2) Left click on the Conflict Route Display (CRD) to view the conflict;
3) Assess the relevance of the conflict notification;
4) 'Sight' the conflict by centre clicking on the callsign of either aircraft in the conflict pair;
5) Implement a plan or action to assure separation; and
6) 'Solve' the conflict, when appropriate, by centre clicking on the Conflict Start Time (CST).

14.2.14.2 Solving a conflict

'Solve' an FPSNA conflict when:

a) a separation standard exists; or
b) you assign separation responsibility to:
   i) a non-FPSNA controller;
   ii) a controller in another FDRG; or
   iii) flight crews using MARSA.

Note: *'Solving' an FPSNA conflict disables conflict alerting (FPCW) for the aircraft concerned at all FPSNA enabled sectors within an FDRG.*

14.2.14.3 Displayed times

As FPCF automatically applies time buffers in accordance with MATS, you may use the displayed conflict start and end times to solve a conflict provided the relevant time has not been truncated.

Note: *Conflict start and end times update automatically following system updates.*

14.2.14.3.1 Trial Probe and Current Probe

A probe result of 'No conflict' may also be used for separation following consideration of FPCF limitations. See 14.2.13.2 FPCF limitations.

Note: *Refer to 14.2.13.4 Trial Probe and Current Probe for the requirements for probe use.*

14.2.14.4 Time-based separation

Only use the displayed CST or CET for time-based separation between an ATS surveillance system position symbol and any other position symbol after checking the integrity of the CST/CET.

Note 1: *The time tolerances for ATS surveillance system position symbols defined in FPCF data differs to those for other position symbols, and do not support procedural standards.*

Note 2: *You may use the displayed CST/CET for separation between Flight Plan and ADS-C position symbols.*

14.2.14.5 Default look-ahead time

Specify in LIs the default look-ahead time for the Sector Conflict Window.

14.2.14.6 Third party communications

Use a look-ahead time of 15 minutes or greater when aircraft are using third party communications.

14.2.14.6.1 Exception

A unit may reduce the third party communications minimum look-ahead time to 10 minutes provided:

a) the SVM authorises the application; and
b) LIs specify which sectors can use this reduced look-ahead time.

14.2.14.7 Combining sectors

Combine to an FPSNA enabled logical position when combining sectors that include an FPSNA enabled sector.

14.2.14.8 Conducting handovers

Include the SCW and its contents in your handover. Identify any areas within the sector combination where FPSNA will not provide conflict notifications.

14.2.15 FPCF tolerances and text values

14.2.15.1 Decode

FPCF tolerances are defined as follows:

Abbreviation	Description
FPCAxx	Flight Plan Conflict Region identifier
	Vertical
1000	1000 FT
1000R	1000 FT within RVSM band
2000	2000 FT
3000	3000 FT (max vertical parameter)
	Longitudinal – time
2MIN	2 minute – surveillance
2OPP	2 minute (opposite direction) – surveillance
10MIN	10 minutes
10OPP	10 minutes (Opposite direction)
15MIN	15 minutes
15OPP	15 minutes (Opposite direction)
T8	T8 - 15 minutes crossing
	Lateral
7SURV	7.5 NM surveillance tolerance
7CEP	7 NM CEP – CTA
14CEP	14 NM CEP – CTA
15XTK	15 NM cross-track (independent)
30XTK	30 NM cross-track (independent)
50XTK	50 NM cross-track (independent)
50R10	50 NM RNP10 (dependent)

14.2.15.2 Text values

Use the following values when entering solution text:

Solution text value	Meaning
SURVEIL	Surveillance separation
OTHERATC	Separation assigned to another sector/unit
DISTANCE	Distance separation standard
SIGHTPASS	Mutual sighting and passing
REQMT	Requirement issued
PILOT	Separation assigned to the flight crew(s)

14.2.16 Disabling FPSNA

14.2.16.1 Considerations

The OCA holder may disable FPSNA if:

a) undetected software faults or a detrimental impact on the wider Eurocat system is identified; or
b) the displayed conflict information is inaccurate or unreliable.

14.3 Military flights

14.3.1 General military operations

14.3.1.1 PCL field '000'

Check the flight plan for Field 18 remarks when a PCL field contains '000' for a specific route segment or segments.

14.3.2 Military maritime surveillance flights

14.3.2.1 Field 18 entry

Enter 'DEST/' in Field 18 followed by:

a) a Lat/Long; or
b) a distance and bearing from a location with an authorised abbreviation.

Note: *The outbound leg will nominate ZZZZ in Field 16 of the notification.*

14.3.2.2 Nominated 'DEST/' point

Ensure that the nominated 'DEST/' point is clear of controlled airspace where ATS services are terminated and flight following with AOCS is commenced.

14.3.2.3 Inbound leg

Mark the first point of contact with ATS as AFIL, with the EOBT as the expected time of first contact.

14.4 Warning and alert processing

14.4.1 Categorisation of situation display alerts

14.4.1.1 Display alert categories

Situation display alerts are categorised in a five tier hierarchy:

Priority	Category	Alert or emergency
1	System detected Safety Net critical event, requiring immediate intervention	STCA MSAW DAIW TDAW A-SMGCS WARNING
2	Aircraft originated notification of emergency, or critical item	EMG RAD HIJ LNK CPD ADC
3	System detected non-conformance or potential priority 1 event, high priority	CFL? CLAM RAM DUP ARCW ARCI FPCW ULAM A-SMGCS CAUTION
4	System detected non-conformance event, medium priority	SAR
5	System detected non-conformance event, low priority	MPR ETO CORD

14.4.1.2 Responding to alerts

When multiple alerts are displayed, respond to the highest priority alert first.

Note: *Priority 1 alerts are a safety net only and are not based on ATC separation standards.*

14.4.2 Alert inhibitions

14.4.2.1 Inhibition alert exceptions

Do not inhibit alerts except as specified in this chapter.

14.4.2.2 Inhibition alert recording

Record alert inhibition by entering the acronym for the inhibited alert in the LABEL_DATA field e.g. MSAW.

14.4.2.2.1 Cancellation

If the requirement ceases, cancel the alert inhibition before handing-off the aircraft to another position.

14.4.2.3 Auto hand-off

Coordinate with the receiving controller if an auto hand-off occurs prior to cancelling the alert inhibition.

14.4.2.4 Hand-off proposal

Coordinate with the receiving sector prior to a hand-off proposal being initiated for an aircraft subject to an alert that will be valid in the receiving sector's airspace.

14.4.2.4.1 Alert display

The transferring controller must assess and resolve an alert displayed for an aircraft in the Handover Out State.

14.4.3 Short Term Conflict Alert (STCA)

14.4.3.1 Alert integrity

On receipt of a STCA:

1) assess its integrity; and
2) issue a 'Safety Alert' or 'Avoiding Action' advice when appropriate.

14.4.3.2 False alert STCA inhibition

Inhibit the STCA on a position if the SM or TMA/TCU Supervisor determines that the number of false alerts is affecting service provision.

14.4.3.3 Individual STCA inhibition

Inhibit the STCA on an individual basis for:

a) aircraft involved in formation flight;
b) aircraft operating in close proximity where pilots are assigned separation responsibility; or
c) military aircraft involved in MARSA operations.

14.4.4 Minimum Safe Altitude Warning (MSAW)

14.4.4.1 MSAW alert integrity

On receipt of an MSAW:

1) assess its integrity; and
2) issue a 'Safety Alert' when appropriate.

14.4.4.2 Terrain following MSAW inhibition

Inhibit the MSAW on an individual basis for military aircraft performing terrain following operations.

Note: *Selection of a visual CFL will disable the aural alarm and display of MSAW warnings for that aircraft.*

14.4.4.3 MSAW inhibition areas

Specify in LIs MSAW inhibition areas designed for traffic patterns associated with particular runway configurations.

14.4.5 Dangerous Area Infringement Warning (DAIW)

14.4.5.1 DAIW alert integrity

On receipt of a DAIW:

1) assess its integrity; and
2) issue a 'Safety Alert' when appropriate.

14.4.6 Predicted Level Mismatch, PLM ('CFL?')

14.4.6.1 PLM alert ('CFL?')

When you receive a PLM alert:

a) assess its integrity; and
b) confirm the pilot's intended/assigned level where appropriate.

Note: *The PLM alert will display when there is a system detected difference between the controller entered CFL and the altitude/level entered by the pilot into the aircraft's control systems. This information will only be sent from suitably equipped aircraft.*

14.4.6.2 Inhibit PLM individual basis

Inhibit PLM for individual aircraft when incorrect data is received.

14.4.6.3 Inhibit PLM position basis

Inhibit PLM on a position when the SM or TMA/TCU Supervisor determines that the number of false alerts is affecting service provision.

14.4.7 Cleared Level Adherence Monitoring (CLAM)

14.4.7.1 CLAM alert

When you receive a CLAM alert, assess its integrity via:

a) voice communications; or
b) CPDLC, using the pre-formatted free text message element ADS-C INDICATES LEVEL DEVIATION. ADVISE INTENTIONS for ADS-C position symbols.

14.4.7.2 Maintain separation

Maintain separation if the alert is valid.

14.4.8 Route Adherence Monitoring (RAM)

14.4.8.1 RAM alert

When you receive a RAM alert not associated with a previously approved or advised deviation, advise the pilot via:

a) voice communications with the extent of the deviation (if known); or
b) CPDLC, using the pre-formatted free text message element ADS-C INDICATES OFF ROUTE. ADVISE INTENTIONS for ADS-C position symbols.

14.4.8.2 Tracking intentions

Following advice from the pilot, confirm tracking intentions and provide advice if required.

14.4.8.3 FDR route modification

When the deviation has not been previously approved or advised, modify the FDR route when the pilot provides tracking intentions.

14.4.8.4 FDR route

Modify the FDR route to reflect the actual route for previously approved deviations.

14.4.8.5 Aircraft deviation from route

When an aircraft's deviation from the FDR route has been previously approved or advised, and the extent of deviation is not known (e.g. during weather deviations), acknowledge the alarm and modify the FDR route when the pilot provides tracking intentions.

14.4.8.6 Deviation extent

Record the deviation in the OTD field or the LABEL_DATA field prior to losing identification for an ATS surveillance system position symbol.

14.4.8.7 Sector coordination

Where the RAM alert for an aircraft will continue to be valid in the receiving sector's airspace, coordinate the alert with the receiving sector prior to the hand-off proposal.

14.4.8.8 EC position

You may inhibit the RAM alert at the EC position to reduce extreme workloads that could compromise safety and to assist in maintaining situation awareness.

14.4.9 Duplicate track alert (DUP)

14.4.9.1 DUP alert

Correct DUP alerts when they occur.

14.4.9.2 Multiple FDRs and a single position symbol

Where two or more FDRs can couple to the same position symbol, modify the SSR code or aircraft address in the appropriate FDR.

14.4.9.3 Multiple position symbols and a single FDR

Where two or more position symbols can couple with a single FDR:

a) assign a different SSR code to the aircraft squawking the incorrect code; or
b) correct the aircraft address in the FDR.

14.4.9.4 SSR code management

If circumstances prevent assigning a different SSR code to the aircraft squawking the incorrect code:

1) assign a new SSR code to the aircraft squawking the correct code; and
2) amend the FDR.

14.4.9.5 ADS-B DUP alert

For an ADS-B DUP alert where the aircraft address details are incorrect, coordinate with the FDC to:

a) update subsequent FDRs; and
b) initiate CHG messages as required.

14.4.9.6 Two uncoupled ADS-B position symbols

If a DUP alert is received on two uncoupled ADS-B position symbols, advise the SS for reporting purposes.

14.4.10 ADS-C route conformance

14.4.10.1 ARCW or ARCI alert

When you receive an ARCW or ARCI alert due to non-conformance with an ATC clearance:

a) establish the pilot's intentions via:
   i) voice communications; or
   ii) CPDLC with the pre-formatted free text message element ADS-C INDICATES OFF ROUTE. ADVISE INTENTIONS or ADS-C INDICATES ROUTE NON-CONFORMANCE. ADVISE INTENTIONS;
b) maintain or re-establish separation; and
c) provide tracking advice to the aircraft.

14.4.10.2 Generated ARCW

For an ARCW due to a known deviation, inhibit the ARCW for the individual aircraft and:

a) comply with clauses 14.4.8.5 Aircraft deviation from route and 14.4.8.6 Deviation extent;
b) annotate 'ARCW' in the LABEL_DATA field; and
c) enable the ARCW if the aircraft will cross the YBBB/YMMM FDRG boundary.

14.4.11 Coordination failure (U) alert

14.4.11.1 Coordination failure alert

When you receive a coordination failure alert:

a) perform voice coordination with the sector or unit that the AIDC message was sent to; or
b) immediately notify the boundary sector if you are not the boundary sector controller.

14.4.12 Search and Rescue (SAR)

14.4.12.1 SAR alert

When you receive a SAR alert:

1) assess its significance; and
2) commence communication checks if valid.

14.4.13 Missed Position Reports (MPR)

14.4.13.1 MPR alert

When you receive a MPR alert:

1) assess its significance; and
2) commence communication checks to obtain the required report.

14.4.13.2 Missed ADS-C report

When the MPR alert is for an aircraft reporting via ADS-C:

a) uplink a Demand Contract Request; or
b) manually enter the position report if received by other means (e.g. CPDLC, surveillance).

14.4.14 Estimated Time of Overflight (ETO)

14.4.14.1 WAYP selection

Select WAYP on sectors without full surveillance coverage.

14.4.14.2 ETO alert

When you receive an ETO alert that you cannot resolve by other means, request the ground speed and confirm the estimate with the pilot.

14.4.14.2.1 Estimate validation

Consider the estimate valid if:

a) the pilot reported ground speed is within 10 kt of the displayed ground speed; and
b) the PETO in question equals the pilot advised estimate.

14.4.14.2.2 Discrepancy

If a discrepancy still exists, calculate an ATC estimate using the last received ATO and the pilot reported ground speed.

14.4.14.3 ETO alert indication

If the ATC estimate fails to resolve the discrepancy, leave the ETO alert displayed.

14.4.14.4 ETO cancellation

The procedures detailed above are not required, and the ETO can be cancelled, when:

a) the aircraft's current and next position are wholly contained within Class G airspace; and
b) the position report and/or estimate has been checked.

14.4.15 Flight Plan Conflict Warning (FPCW)

14.4.15.1 FPCW alert

When you receive an FPCW alert:

1) assess the conflict information; and
2) resolve the conflict if necessary.

14.4.15.2 Inhibiting FPCW alerting

Do not inhibit FPCW alerting for individual aircraft.

14.4.16 Alert parameters

14.4.16.1 Alerts

The parameters for each type of alert are:

Alert	Parameter
STCA	a) Horizontal parameters: i) TMA 2.1 NM; and ii) en route 4.6 NM; b) Vertical parameters: i) 600 FT for all aircraft below FL285 and RVSM capable aircraft below FL410; and ii) 1400 FT for all aircraft above FL414 and non-RVSM capable aircraft above FL285; and c) Controller warning time: 60 to 90 seconds prior to infringement (or less if the parameters mentioned above are met at a later time). ***Note:*** *Where block levels are in use, the vertical parameters apply from above the UFL to below the LFL.*
MSAW	Controller warning time is 60 seconds. There is no buffer between terrain and the alert altitude.
APAIW	Controller warning time is 60 seconds.
TDAW	A TDAW occurs when an ATS surveillance system position symbol enters the relevant area. There is no advanced warning.

Alert	Parameter
PLM (CFL?)	The PLM alert will display when there is a system detected difference between the controller entered CFL and the altitude/level entered by the pilot into the aircraft's flight control system. This information will only be sent from suitably equipped aircraft. The alert will activate if a difference of more than 200 FT is detected between the CFL and the pilot selected altitude/level. The alert will cease if the difference is no longer detected.
CLAM	In the cruise, when the MCL or ABL differs from the CFL by: a) more than 200 FT; b) is greater than the UFL by 200 FT; c) is less than the LFL by 200 FT; or d) an ADS-C level deviation range event report is received indicating a non-conformance with the CFL. For a change of level, when the aircraft maintains a level: a) 200 FT more or less than the CFL; b) 200 FT greater than the UFL; or c) 200 FT less than the LFL. CLAM alerts are not available when the CFL or UFL is at or below: a) A015 for radar or ADS-B position symbols; and b) FL110 for ADS-C position symbols.
RAM	The parameters of the route surface model are: a) a radius of 8 NM for points; and b) a width of 15 NM for published and unpublished corridors.
SAR	A SAR alert occurs: a) ten minutes after the time the FDR was coordinated (or ETA for a system activated SARTIME); or b) at the selected time for a manually activated SARTIME.
MPR	An MPR alert occurs when a position report has not been received for a point designated as a compulsory position report three minutes after the time that the report was due.
ETO	An ETO alert occurs when a PETO varies from the system estimate or previously entered PETO by more than 150 seconds.
FPCW	Conflict alerting includes: a) an alert indication in the Sector Conflict Window (urgent alert) 300 seconds prior to the conflict start time; and b) a FPCW alert (critical alert) 180 seconds prior to the conflict start time.
A-SMGCS	See 12.7.2.2 A-SMGCS alert generation

14.5 SAR alerting and SARWATCH

14.5.1 SAR alerting

14.5.1.1 Responsibility

The appropriate Eurocat sector is responsible for SAR alerting services to flights communicating on HF.

14.5.2 SARWATCH

14.5.2.1 Tools and notations

Use graphic tools or scratch pad annotations to determine required SARWATCH actions.

14.5.2.2 Taxiing aircraft

Where system activated SARTIMERs for locations defined as 'DTI' aerodromes are not available, hold the SARWATCH for a taxiing aircraft by:

a) manually activating the aircraft's SARTIMER;
b) displaying the aircraft's callsign and SARWATCH time at the departure aerodrome using text on screen; or
c) recording the aircraft's callsign, departure aerodrome and taxi time on a scratch pad.

14.5.2.3 Landing IFR aircraft

Where system activated SARTIMERs for locations defined as a 'DTI' aerodrome are not available, hold the SARWATCH for a landing IFR aircraft by:

a) manually activating the aircraft's SARTIMER;
b) displaying the aircraft's callsign and SARWATCH time at the destination aerodrome using text on screen; or
c) recording the aircraft's callsign, destination aerodrome, ETA and SARWATCH time on a scratch pad.

14.5.2.4 Cancellation prior to circuit area

When an IFR aircraft cancels SARWATCH prior to the circuit area or destination ETA:

1) acknowledge the cancellation;
2) enter 'CSW' in the LABEL_DATA field; and
3) finish the FDR once the destination ETA is reached.

14.5.2.5 Cancellation in circuit area

When an aircraft cancels SARWATCH in the circuit area and the cancellation is acknowledged:

a) finish the FDR;
b) delete the text on screen; or
c) delete the scratch pad annotation.

14.5.2.6 Unreported arrival

Do not cancel the expired SARTIMER of an aircraft that has failed to report arrival at an uncontrolled aerodrome. Acknowledge the aural alarm or extend the SARTIMER.

Note: *Cancellation of the SARTIMER of an aircraft that has reached its destination will allow the FDR to automatically finish.*

14.5.2.7 HOLD function

When using the HOLD function for an aircraft near its destination, take the aircraft out of HOLD before finishing the FDR.

14.5.2.8 OPS NORMAL calls

When holding an OPS NORMAL call for an aircraft and a system activated SARTIMER is not available:

a) manually activate the aircraft's SARTIMER;
b) display the aircraft's callsign and OPS NORMAL time using text on screen; or
c) record the aircraft's callsign, ETA and OPS NORMAL time on a scratch pad.

Cancel the SARTIMER (or delete the displayed information) once all calls are completed.

14.6 Flight data processing

14.6.1 General

14.6.1.1 Responsibility

You are responsible for the display of information at your position.

14.6.2 System integrity

14.6.2.1 FDP operation at risk

The SS will conduct a 'FPL save' before any intrusive, or potentially intrusive, interaction with the FDP nodes occurs.

14.6.3 Recording data

14.6.3.1 Recording data into the FDR

Record all flight information and instructions directly into the FDR and keep them up to date. Delete information that is no longer relevant.

14.6.3.2 Receiving controller responsibility

Ensure the HMI and display of aircraft entering your airspace from another FIR or military area is accurate.

14.6.3.3 Data to record

Record appropriate data directly into the FDR on issue or receipt. This data may include, but is not limited to:

a) ATDs;
b) pilot position reports;
c) pilot estimates;
d) pilot reported altitudes and flight levels;
e) pilot reported speed;
f) coordinated estimates from adjacent units;
g) cleared flight levels;
h) route/amended route details;
i) new registration (REG) when advised of a change of aircraft;
j) changes in aircraft navigation capability or equipment;
k) FLTID if different to callsign; and
l) aircraft address.

14.6.3.3.1 Changes to planned level

If you assign a change to the planned level prior to coordination of the FDR, enter the new level directly into the FDR.

14.6.3.3.2 Coordinate CHG message

Coordinate and send a CHG message, if required.

14.6.3.4 Recording coordination

When you cannot enter coordination directly into the FDR/FDE:

a) record the coordination details on a scratch pad; or
b) use text on screen to display the coordination details on the ASD where the aircraft will enter your airspace.

14.6.3.4.1 Information management

Enter the coordination details into the FDR at the earliest available opportunity and:

a) annotate the scratch pad to indicate that the information has been entered; or
b) delete the text on screen displaying the coordination details from the ASD.

14.6.4 Distribution of AIREPs and movement reports

14.6.4.1 Movement report distribution

Treat movement reports such as circuit area, landing, taxiing and departure reports as position reports and distribute accordingly.

14.6.5 Processing of non-RVSM approved flight plans

14.6.5.1 FDC action

When you receive a FPL in the SSR CADAS mailbox (and a backup copy in the FDC operational email account) check the displayed RVSM status and:

a) if the RVSM designator 'W' is not displayed in Field 10 no action is required; or

b) if 'W' is displayed in Field 10:
   i) remove the 'W' from the corresponding FDR; and
   ii) enter CFM RVSM in the FMF (applicable only to FDC of the first Australian ATSC affected).

Note 1: *FPL submitted for non-RVSM aircraft are identified by a filter in the Australian Aeronautical Message System (AAMS). AAMS delivers a copy of the FPL to the FDC SSR CADAS mailbox and to the FDC operational email account in Brisbane and/or Melbourne as appropriate.*

Note 2: *The AAMS filter list is maintained by the COMC from information provided by the Australian Airspace Monitoring Agency (AAMA). AAMA information is derived from CASA and other ICAO Regional Monitoring Agency RVSM approval records.*

14.6.5.2 Controller actions

When you observe CFM RVSM in the FDR:

1) clarify the RVSM status with the pilot;
2) update the FDR as required; and
3) initiate a CHG message if the aircraft will enter another FIR.

14.6.6 LABEL_DATA field

14.6.6.1 Recording information - order of priority

Record information in the LABEL_DATA field in the following order of priority:

1) an asterisk (*);
2) the acronym for any alert inhibited for an individual aircraft (e.g. MSAW);
3) a hash (#) symbol;
4) an equals (=) symbol;
5) AHO when the Automatic Hand-Off functionality is disabled for an individual FDR;
6) special priority (e.g. SPECREQ, MED etc);
7) coordination or supplementary information as defined in LIs/LoA;
8) when an aircraft is operating VFR-on-top or IFR Pickup;
9) when an aircraft is receiving a SIS;
10) information or instructions issued to the pilot;

Note: *The LABEL_DATA field entry is sufficient to indicate that information or instructions have been passed to the pilot.*

11) SARWATCH time; and
12) other information relevant to an individual controller.

14.6.6.2 Recording overflow information

Record overflow information from the LABEL_DATA field on an electronic strip or scratch pad.

14.6.6.2.1 Enter * in LABEL_DATA field

Place an asterisk (*) into the LABEL_DATA field of the relevant aircraft to indicate that information is recorded elsewhere.

14.6.6.2.2 Voice coordination

Voice coordinate information related to an asterisk in the LABEL_ DATA field of an aircraft before initiating the hand-off to a subsequent sector or unit.

14.6.6.3 Clearance after deviations

If you cannot update the FDR route to reflect an aircraft's clearance, indicate the actual clearance in the label using:

a) the OTD field; and
b) the next position the aircraft is cleared to.

14.6.7 Use of the RNP AR highlight function

14.6.7.1 Activation of RNP AR label highlight

Insert an equals symbol (=) in the LABEL_DATA field to activate the RNP AR highlight where an aircraft requests an RNP AR approach and has not planned the correct RNP capability.

14.6.7.2 De-activation of RNP AR label highlight

Insert a hash symbol (#) in the LABEL_DATA field to de-activate the RNP AR highlight when required.

14.6.7.3 Arrival instructions/procedures for RNP AR capable aircraft

Scenario	Procedure
Eurocat towered destination	Issue a STAR terminating at an RNP AR approach subject to STAR allocation tables and the following exceptions: a) Alternative instructions from the Flow; b) The pilot requests an alternative approach; c) Variations detailed in LIs; or d) Where a STAR is not available.
Non-Eurocat towered destination	Coordinate the RNP AR request to the Tower and issue to the aircraft: a) the appropriate STAR where applicable; and b) the coordinated approach expectation if received.
Non towered destination	Deactivate the highlight on receipt of pilot advice that the RNP AR approach will not be conducted.

14.6.7.4 Aircraft diversion with manually deactivated RNP AR highlight

Remove the hash symbol (#) from the LABEL_DATA field for RNP AR capable aircraft diverting to an alternate destination.

14.6.7.5 RNP AR capable aircraft conducting an RNP AR departure

Select the appropriate RNP AR associated system RWY to highlight the label ACID.

14.6.8 GLOBAL_OPS_INFO field (GOF)

14.6.8.1 Use

Use the GOF for:

a) flow specific information or instructions; and
b) operational information defined in LoA/LIs.

14.6.9 Interactive runway

14.6.9.1 Arrival runway

Select or amend the arrival runway (ARWY) as specified in LIs to indicate a STAR clearance has been issued.

14.6.10 Traffic management windows

14.6.10.1 Use

Only APP/DEP controllers for an aerodrome may change the settings of that aerodrome's Traffic Management Window.

Specify the use of other traffic management windows in LoA/LIs.

14.6.11 Exit Flight Level (XFL)

14.6.11.1 Interaction (excluding NTAS towers)

Unless specifically following the requirements of 6.4.4 Exit Flight Level (XFL):

a) do not interact with the XFL field;
b) centre click or select ESC from the keyboard to close the field if you open it inadvertently. Do not select Enter; and
c) if you accidentally modify or interact with the XFL field, inform the SM/SS.

14.6.12 Stereo (STE) FPLs

14.6.12.1 STE management procedures

Use the following process to manage STE plans:

a) Details required for creation of a STE plan are:
   i) ACID (in accordance with established naming conventions);
   ii) validity period;
   iii) ACFT type;
   iv) WTUR;
   v) ADEP;
   vi) TAS;
   vii) RFL;
   viii) ADES;
   ix) route; and
   x) RMK (as required);
b) User presents STE draft to SS;
c) SS checks STE draft for compliance with format and naming convention; and
d) SS passes STE draft to FDC who creates STE plan and prints a copy for SS and user. The SS copy is retained in the STE Plans file until:
   i) expiration of the validity period; or
   ii) when the STE has been included in the Eurocat database.

14.6.12.1.1 Long term STEs

Submit an NRFC if the STE plan is required for long-term use.

14.6.13 Controller actions and the coordination queue

14.6.13.1 ABI

Update the FDR with information received.

14.6.13.2 Coordination queue

Only process PAC, EST, CPL and CDN messages in the coordination queue where their use is authorised in LIs/LoA.

14.6.13.2.1 PAC or EST

Coordinate and update the FDR with the information received.

14.6.13.2.2 CPL

Create and coordinate a new FDR, or coordinate an existing FDR, with the information received.

14.6.13.2.3 CDN

Assess the change proposed in the CDN message. If the change is acceptable:

a) update the FDR and respond with an ACP message; or
b) respond with a CDN or REJ message as appropriate.

14.6.13.3 MAC

When you receive a MAC message:

a) contact the transmitting unit to confirm the status of the flight in your FIR; and
b) update the FDR accordingly.

14.6.13.4 MIS

Update the FDR with the information received.

14.6.14 FDR/FDEs for training or testing

14.6.14.1 ACID

Where FDR/FDEs are used for testing or training purposes, use the format 'NTAS' or 'TATSXXX' where 'XXX' is a number derived from the following table:

Unit	Range
Adelaide TCU	TATS001 to TATS049
Adelaide Tower	NTAS001 to NTAS030
Brisbane ENR	TATS050 to TATS149
Brisbane TMA/TWR	TATS150 to TATS199
Brisbane TWR (INTAS)	NTAS030 to NTAS080
Brisbane FDC/Testing	TATS200 to TATS399
Broome TWR	NTAS081to NTAS110
Cairns TCU/TWR	TATS400 to TATS449
Cairns TWR (INTAS)	NTAS111 to NTAS140
Canberra TWR	TATS450 to TATS459
	NTAS141 to NTAS170 (Reserved)
Canberra TCU	TATS460 to TATS469
	NTAS171 to NTAS200 (Reserved)
Gold Coast TWR	TATS470 to TATS479
Gold Coast TWR (INTAS)	NTAS201 to NTAS240
Melbourne ENR	TATS500 to TATS599
Melbourne TMA	TATS600 to TATS649
Melbourne TWR	NTAS241 to NTAS280
Melbourne FDC/Testing	TATS650 to TATS849
Perth TCU/TWR	TATS850 to TATS899
Perth TWR (INTAS)	NTAS281 to NTAS330
Rockhampton TWR	NTAS331 to NTAS360
Sydney TCU/TWR	TATS900 to TATS999
Sydney TWR (INTAS)	NTAS361 to NTAS440

14.6.14.2 Restrictions

Unless coordination is performed with the receiving SS, do not permit any FDR/FDE created for training to:

a) cross an FDRG or foreign FIR boundary; or
b) enter military or procedural tower airspace.

14.6.14.2.1 Additional restrictions

Do not:

a) use external messaging under any circumstances; or
b) interact with the TRS function without SS permission.

14.6.14.3 Callsigns to ignore

Ignore any messages received with callsigns NTAS001 to NTAS440 or TATS000 to TATS999.

14.6.15 TRS function

14.6.15.1 TRS use

Only the FDC groups, East and PEA TCU controllers may use the TRS window functions.

14.6.15.1.1 Message requirements

For messages requiring dissemination, provide details to FDC for message generation and transmission.

Do not use the CHG message format from the TRS function to transmit messages to other units if the change contents relate to FPL Field 18.

Note: *All other message formats may be used.*

14.6.16 Processing FMF and RMK comments

14.6.16.1 FMF and RMK comments

Flight Plan anomalies are identified in:

a) the Flight Message Field (FMF) of FDRs; and
b) the RMK field of FPLs.

14.6.16.1.1 FMF creation by FDC

FDC must make entries in the FMF of FDRs to identify information unable to be processed by the FDP that cannot be resolved by FDC.

14.6.16.1.2 RMK creation by BOF

BOF must make entries in the RMK (Field 18) of flight plans to identify anomalies unable to be resolved with originators.

14.6.16.2 FMF and RMK processing by ATC

When an asterisk appears in the aircraft's label or electronic strip, process FMF and RMK entries as per the following (specific processing for FMF is shown at 14.6.17 Specific FMF processing):

ATC Action	Details
Pilot confirmation	Confirm with the pilot what corrections need to be made to the flight plan.
Update FDR/FDE	Once confirmed with the pilot, update the FDR/FDE with the correct information.
Delete FMF/RMK	Delete the corresponding comments from the FMF and/or RMK once the FDR/FDE has been amended.
Issue CHG message	Send a CHG message through the FDC (if required).

14.6.16.2.1 Exception for tower controllers

Tower controllers are not required to check for comments.

14.6.16.3 Tower controllers

Check the other info/flight plan window/FDE when:

a) not all FMF or RMK data can be displayed in the OTHER_INFO/FDE field of the strip due to field size limitations; or
b) the FDR/FDE is not a scheduled flight.

14.6.16.3.1 Exception - INTAS towers

Check the FMF/RMK field via clearance pop up window and delete the FMF comments once processed.

14.6.17 Specific FMF processing

<table>
<tr><th>Item not processed</th><th colspan="2">FDC action</th><th>ATC action</th></tr>
<tr><td rowspan="11">TYPE cannot be identified</td><td colspan="2">Enter approved generic aircraft types (shown below) in FDR and CFM TYPE in the FMF when the aircraft type:
a) cannot be determined; or
b) is not recognised by Eurocat.
Generic types:</td><td rowspan="11">Clarify aircraft type with pilot and update FDR.</td></tr>
<tr><td>ULAC</td><td>Ultralight or Microlight</td></tr>
<tr><td>BALL</td><td>Balloon</td></tr>
<tr><td>SGL</td><td>Single</td></tr>
<tr><td>SSGL</td><td>‘Super’ Single</td></tr>
<tr><td>TWIN</td><td>Light Twin</td></tr>
<tr><td>TURB</td><td>Twin or Single Turbo</td></tr>
<tr><td>JET</td><td>Jet</td></tr>
<tr><td>HEL</td><td>Helicopter</td></tr>
<tr><td>MILJ</td><td>Military Jet</td></tr>
<tr><td>TYPE/WTC combination cannot be identified</td><td colspan="2">Enter CFM TYPE+WTC in FMF.</td><td>Clarify TYPE+WTC with pilot and update FDR.</td></tr>
<tr><td>NAVCOM cannot be identified</td><td colspan="2">Enter CFM NAVCOM in FMF.</td><td>Clarify navigation or communication equipment with pilot and update FDR.</td></tr>
<tr><td>Surveillance equipment/ capabilities cannot be identified</td><td colspan="2">Enter CFM SUR in FMF.</td><td>Clarify surveillance equipment/capabilities with pilot and update FDR.</td></tr>
<tr><td>ADEP is not identified</td><td colspan="2">Enter CFM ADEP in FMF.</td><td>Clarify ADEP with pilot and update FDR.</td></tr>
<tr><td>EOBT cannot be identified</td><td colspan="2">Enter CFM EOBT in FMF.</td><td>Clarify EOBT with pilot and update FDR.</td></tr>
<tr><td>ADES cannot be identified</td><td colspan="2">Enter CFM ADES in FMF.</td><td>Clarify ADES with pilot and update FDR.</td></tr>
<tr><td>TAS cannot be identified</td><td colspan="2">Enter CFM TAS in FMF.</td><td>Clarify TAS with pilot and update FDR.</td></tr>
<tr><td>RFL cannot be identified</td><td colspan="2">Enter CFM RFL in FMF.</td><td>Clarify RFL with pilot and update FDR.</td></tr>
</table>

Item not processed	FDC action	ATC action
Route cannot be identified	Enter FRC…. (as per below) in FMF. a) FRC: when amending a whole route; b) FRC AFTER [known point]: when amending after a point; c) FRC BEFORE [known point]: when amending before a point; and d) FRC BTN [known point] [known point]: when amending between points.	Clarify route with pilot and update FDR.
EET cannot be identified	Enter CFM EET in FMF.	Clarify EET with pilot and update FDR.
PCL cannot be identified	Enter CFM PCL in FMF.	Clarify with pilot the planned flight level for a specific route segment where PCL is incorrect and update FDR.
REG cannot be determined	Enter CFM REG in FMF.	Clarify aircraft registration with pilot and update FDR.
FRUL cannot be determined	Enter CFM FRUL in FMF.	Clarify Flight Rules with pilot and update FDR.
ACID exceeds eight characters	Rationalise the ACID phonetically to eight characters or less. Enter ACID [actual ACID] in FMF.	Clarify callsign with pilot and update FDR. If you cannot update the FDR, retain the FMF information.

14.6.18 Route 'WAR' messages - Eurocat

14.6.18.1 Maintain integrity of route provided

Where route creation or modification results in a 'WAR' message, ensure the route retained by the FDP maintains the integrity of the aircraft's route.

14.6.18.2 Modify FDR/FDE

Modify the FDR/FDE if more route information is required.

14.6.18.3 'WAR' caused by a SID or STAR

If a SID/STAR causes a 'WAR' message, refer to 14.8.6 SID/STAR processing.

14.7 FDR/FDE management

14.7.1 FDR/FDE

14.7.1.1 Creation

Create an FDR/FDE for an aircraft requiring ATS in airspace managed by Eurocat/ INTAS, except for aircraft:

a) requesting a one shot service;
b) only affecting a Eurocat control tower and for which a paper strip has been created;
c) eligible for a RadTag;
d) eligible for a RadTag that will directly enter an adjoining partition in which a service is not required; or
e) operated by Project Loon in accordance with 14.7.1.6 STE plans - Project Loon balloons.

14.7.1.2 FDR cannot be amended

When an aircraft diverts and the original FDR cannot be amended, create a new FDR.

14.7.1.2.1 Diverting to a Ground Delay Program (GDP) aerodrome

For aircraft diverting to a GDP aerodrome, advise the SM for relay to the NCC.

14.7.1.3 INTAS limitations

For flights that will affect an INTAS tower:

a) use seven characters or less in the callsign of an AFIL FDR; and
b) only use four letter designators in the ADEP or ADES field.

14.7.1.4 FDR manual cancellation - Eurocat

Manually cancel an FDR when:

a) the corresponding flight has arrived at ADES and cancelled SARWATCH;
b) the FDR does not finish automatically on arrival at an aerodrome;
c) the corresponding flight has been cancelled by the aircraft operator; or
d) amendment to the record is necessary and it is simpler to replace the record with a new FDR.

14.7.1.4.1 Prior to cancelling an FDR

Prior to cancelling an active FDR, check that no other Eurocat sectors within the same FDRG will require the FDR.

14.7.1.5 STE plans - Eurocat

When creating an FDR from an STE, enter the:

a) appropriate flight rules;
b) full aircraft registration; and
c) TAS as appropriate for the flight.

14.7.1.5.1 Obtain TAS

Obtain a TAS from the pilot if the flight will be subject to procedural control.

14.7.1.6 STE plans - Project Loon balloons

Use the 'HBAL' STE flight plan when creating an FDR for Project Loon balloons operating inside controlled airspace. The details of the 'HBAL' STE flight plan are as follows:

STE field	Details
Callsign	HBAL
Type	BALL
Wake Turbulence	L
ADEP	ZZZZ
ADES	ZZZZ
RFL	FL600
Route	As defined for YBBB and YMMM data
Field 18	DEST/ information as defined for YBBB and YMMM data RMK/ENTER FDR CREATION TIME AND CODE FM PFP OPR/GOOGLE
TAS	N0045

Note 1: *The DEP/, Route and DEST/ information in the STE flight plan uses arbitrary coordinates on the western and eastern sides of the relevant FIR.*

Note 2: *For the purposes of the STE flight plan, Predicted Flight Path is abbreviated as PFP.*

14.7.1.6.1 Using the 'HBAL' template

When creating an FDR from the 'HBAL' template:

a) enter the callsign as 'HBAL(*three digits*)' to correspond with the Predicted Flight Path information;
b) enter the balloon's current position and waypoints based on the Predicted Flight Path information in the Route field;
c) update the Equipment fields to include Z, B1 and C;
d) update Field 18 by:
   i) replacing the coordinates after DEP/ and DEST/ with the balloon's current position and coordinates based on the projected flight path;
   ii) entering 'CODE/(*ICAO aircraft address*)' from the Predicted Flight Path information; and
   iii) entering 'RMK/FDR CREATED AT (six figure time group)';
e) update the FTYP to X; and
f) enter GOOGLE as the aircraft registration.

Note 1: *Eurocat will accept a block level clearance of FL500 to FL600.*

Note 2: *The STE plan TAS of N0045 permits the creation of waypoints at every one degree of longitude.*

Note 3: *Refer to the Project Loon balloon entry in the ATS Training Portal for more information.*

14.7.1.6.2 Managing the HBAL FDR

As a Project Loon balloon's approval to operate in controlled airspace does not restrict its movement, you may:

a) use system tools to update the balloon's position when:
   i) required for separation or situation awareness; or
   ii) the balloon cannot be coupled to the ATS surveillance system position symbol; and
b) inhibit the RAM alert in accordance with 14.4.8 Route Adherence Monitoring (RAM) when the balloon is within ATS surveillance system coverage.

14.7.1.6.3 Daily FDR refresh

As soon as practicable each morning, the Supervisor must ensure any current HBAL FDRs that are more than six hours old are cancelled and new FDRs are created. Complete this task by 0000z.

Note 1: *Old FDRs may cause unexpected decoupling errors in Eurocat.*

Note 2: *The Supervisor may delegate the task to controllers as workload dictates.*

14.7.1.6.4 Display using private maps

You may use a private map (or maps) to depict balloon operations inside controlled airspace and outside ATS surveillance system coverage provided:

a) the map is not used during:
   i) aircraft operations above FL450 within 100 NM of the private map boundary, unless lateral separation exists; or
   ii) balloon cutdown in accordance with section 6.3 of LoA_3365; and
b) the map:
   i) encompasses the current position and predicted progress of the balloon(s) for the next 6 hours, based on Loon website information; and
   ii) contains the time of map creation and the text "LOON (*level*)" e.g. "LOON FL500&ABV".

14.7.1.6.5 Updating the private maps

Update the map:

a) every 6 hours; or
b) when position information sourced from the Project Loon website, or updated flight path information received from the Operator, indicates a balloon is operating outside the map boundary.

14.7.1.7 Flight not returning to departure point

When a flight will not return to the departure point and will not receive a service after leaving controlled airspace:

a) enter an ADES as the first point outside controlled airspace;
b) instruct the pilot that flight details have only been entered to that point and any further flight in controlled airspace will be considered a flight with no previous details (pop-up); and
c) inhibit the FDR.

Note: *This procedure does not replace the current ZZZZ procedure for destinations not known to the system.*

14.7.1.8 Advise FDC

Advise the FDC of locally created, modified or cancelled FDR/FDEs that:

a) affect non-Eurocat or Military units; or
b) cross the FDRG boundary.

14.7.1.8.1 Exceptions

This does not apply when the creation, modification or cancellation of the FDR/FDE:

a) will have no impact on other units; or
b) affects only one unit and you voice coordinate the change.

14.7.1.9 FDC notification

Use the phrase 'FOR DISTRIBUTION (amended information)....' when notifying the FDC.

14.7.2 Operations close to but not crossing a boundary

14.7.2.1 RadTag display

If positive identification or a relay of identification is provided for a flight operating close to but not entering the FDRG, use a RadTag to display the callsign and operating level.

14.7.2.1.1 Re-identification

If a track drop occurs when using a RadTag, re-identify the aircraft prior to re-tagging.

14.7.2.2 Private map creation

Create a private map when you cannot use the RadTag function and the aircraft is operating close to the boundary.

14.7.2.2.1 Callsign and operating level

Ensure that the private map indicates the area in which the aircraft is operating. You may display the aircraft's callsign and operating level as part of the private map or directly on the ASD via text on screen.

14.7.3 Inhibiting an FDR - Eurocat

14.7.3.1 Conditions

Inhibit an FDR when:

a) the aircraft will not receive ATS from another Eurocat sector or unit;
b) you do not anticipate any further involvement with the aircraft;
c) the aircraft has left your area of responsibility and been transferred to the next frequency; and
d) inhibiting the FDR has no adverse effect on the situation awareness of another controller.

14.7.4 Hand-off to SUSP

14.7.4.1 AIDC FIR

If the hand-off to an AIDC FIR fails:

a) you must manually hand-off to SUSP if the aircraft will re-enter your FDRG; or

b) you may manually hand-off to SUSP if the aircraft will remain clear of your FDRG.

Note: *For flights that re-enter your FDRG, handing-off to SUSP ensures an Announced position symbol is displayed to the sector responsible for the flight where it re-enters the FDRG.*

14.7.4.2 Non-AIDC FIR

For aircraft entering a non-AIDC FIR, you may only manually hand-off to SUSP if the aircraft will remain clear of your FDRG.

Note: *For clauses 14.7.4.1 AIDC FIR and 14.7.4.2 Non-AIDC FIR, the YBBB FDRG also includes controlled airspace within the ANAU and AGGG FIRs where East provides Air Traffic Services.*

14.7.5 Coupling an FDR more than 20 NM from ADEP

14.7.5.1 HMI required actions

When an uncoupled aircraft requests a service from a Eurocat sector (e.g. VFR requesting a clearance, Military aircraft returning from military frequencies), activate and couple the FDR as follows:

a) JTRF the PREA plan to either:
   i) yourself if in an en route/TMA/TCU position; or
   ii) the adjacent TMA/TCU sector if a tower position;

b) EST the FDR;

c) DEP the FDR as close to the ATD as possible (noting the earliest ATD that can be entered is 59 minutes in the past);

d) ACC the FDR, then UPR to the location of the uncoupled position symbol for coupling to occur; and

e) As required, hand-off to the tower position.

Note: *Steps c) to e) will need to be done by the jurisdiction controller from step a).*

14.7.5.1.1 Strip posting

Tower positions must:

a) coordinate FDR interactions with the associated TMA/TCU position; and

b) not become the jurisdiction controller until a strip is posted.

14.7.5.1.2 Do not manually couple

Unless all else fails, do not manually couple the FDR.

Note: *Coupling will not occur in other partitions and APRs may not update the FDR.*

14.7.6 FDR management - Eurocat towers

14.7.6.1 Pre FDR COORDination data check

Before COORDinating an FDR, check that the following paper and electronic strip data is identical:

a) ACID;
b) ASSR; and
c) CFL (if recorded on the paper strip).

14.7.6.2 Handwritten amendments

Enter any handwritten amendments made to the paper strip into the FDR.

14.7.6.3 Changing flight plan state for departing aircraft

COORDinate a PREA FDR when an aircraft is authorised to push back or taxi by:

a) a status click on the flight plan state field of the strip; or
b) entering the estimated airborne time as ETN in the FST field of the flight plan window.

14.7.6.4 Post FDR COORDination data check

Post COORDination of an FDR, check the following paper and electronic strip data is accurate:

a) ACID;
b) ASSR;
c) RWY; and
d) System SID - if required for Business Unit operations.

14.7.6.4.1 Paper strip used to indicate COORDination of an FDR

Place a tick in Box 1 (Box 7 SY TWR) when a paper strip is used to indicate FDR COORDination.

14.7.7 Coordination between Eurocat and non-Eurocat/INTAS units

14.7.7.1 Entering ATD for non-Eurocat INTAS towers

LIs may vary the requirement to enter the ATD for flights departing from non-Eurocat/INTAS towers under ATS surveillance system coverage.

14.7.8 Eurocat uniqueness check

14.7.8.1 Eurocat uniqueness check

To reduce the potential for processing duplicate flight plans and the display of duplicate electronic strips with the same ACID, ADEP and ADES, the Eurocat system enforces uniqueness checks on FDR creation and subsequent modification.

14.7.8.1.1 Two FDRs the same

Two FDRs with the same ACID, ADEP and ADES can only exist in the FDR database if the difference in EOBTs is equal to or greater than the FPL_EOBT_RANGE parameter defined in the FPL_PARAMETER.ASP file.

14.7.8.1.2 Another uniqueness check

It is not possible to coordinate an FDR if there is already a different FDR with the same ACID in the COORDinated or any active Flight Plan State.

14.7.9 Re-issue of expired FPLs

14.7.9.1 Request FDC to resubmit

Request FDC to resubmit the expired FPL when details are no longer available.

Note: *FDC will include CFM ALL DETAILS in the FMF.*

14.7.10 Reissuing Eurocat flight plans for returning aircraft

14.7.10.1 Reissuing Eurocat flight plans for returning aircraft

When a departing aircraft couples to an FDR and subsequently returns for a landing, the tower controller must:

a) confirm with the pilot after landing that the existing Flight Plan will be reissued, acknowledging that the flight status may be unknown; and

b) request the FDC to reissue the FDR with the original, or a pilot advised, EOBT.

Note: *The reason for reissuing the FDR with the original EOBT is in case the company submits a CHG/DLA message after the flight has returned.*

14.8 Processing of FDO queues

14.8.1 General

14.8.1.1 Queue processing requirements

Make corrections and re-enter data to support the provision of air traffic services.

14.8.1.2 Manual delivery

Where re-entry to the FDP is not possible or not provided for in LIs, print out and deliver the information to the first affected controller. Where a controller cannot be identified, refer the message to the SS.

14.8.1.3 First point of contact

Contact the message originator as the first option to resolve errors.

14.8.1.4 Syntax errors

Correct syntax errors not affecting operational data (e.g. extra spaces, unauthorised characters, addition or omission of dashes and slashes) without reference to the originator.

14.8.1.5 Route integrity

Maintain the integrity of route details in a rejected message by keeping route modifications and/or truncations to a minimum.

14.8.2 Specific queue processing

14.8.2.1 Requirements for each FDC queue

Queue	Requirements
ICAO R	Process messages in keeping with the requirements of this chapter.
ICAO T	Use accurate addresses to transmit messages according to the route of the corresponding flight plan (add/delete/modify addresses as appropriate).
RPL	RPL not currently used by Australian ATS.
ALR	Process messages in keeping with the requirements of this chapter.
ICAO C	
AIDC C	
AIDC O	
AFTN LF	In consultation with the SS, use alternate means to relay the messages.
OTHERS	Process messages in keeping with the requirements of this chapter.
AIQ	
ETS	

14.8.3 ABI, EST and PAC message processing

14.8.3.1 ABI message processing

Check the entire contents of an ABI message as there may be more than one error.

14.8.3.1.1 Manual modification

Manually modify the affected FDR to reflect the contents of an ABI message.

Note: *An ABI message cannot be re-proposed to the FDP.*

14.8.3.1.2 Boundary estimate adjustment

If the boundary estimate of the affected FDR is not within 10 minutes of that shown in an ABI message, modify the EOBT of the FDR to adjust the boundary estimate to within 10 minutes.

14.8.3.1.3 SSR code entry

Enter the SSR code as the PSSR, not ASSR.

14.8.3.1.4 Refer to controller

Where it is not possible to manually modify the FDR, refer the ABI message to the first affected controller.

14.8.3.1.5 Example ABI error messages and FDC actions

Typical ABI error message	FDC action
Multiple FDRs exist	1) Determine the correct FDR; and 2) Modify FDR fields to reflect the content of the ABI.
Matching FDR not found	1) Request FDR from the message originator (RQP); and 2) Modify FDR fields once received.
ATC entry time outside window	1) Modify the FDR EOBT ensuring that the boundary estimate is within 10 minutes of that of the ABI; and 2) Modify FDR fields to reflect the content of the ABI.
Message not compatible with FPL state	Refer the message to the jurisdiction controller and update the FDR.
Coordination point not on the route	1) Modify the route details of the FDR to reflect the ABI; and 2) Modify all other fields to reflect the content of the ABI.

14.8.3.2 EST message processing

On receipt of a rejected EST message:

a) coordinate with the affected controller immediately; and
b) if a corresponding FDR cannot be identified:

Typical EST error message	FDC action
Multiple FDRs exist	Determine the correct FDR and advise the affected controller when referring the EST message.
Matching FDR not found	1) Request FDR from originator (RQP); 2) Advise the affected controller of the situation when referring the EST message; and 3) When the FDR is received (or if unable to obtain details), advise the affected controller.

14.8.3.3 PAC message processing

On receipt of a rejected PAC message:

a) check the entire contents of the PAC message as there may be more than one error;
b) manually modify the corresponding FDR to reflect the contents of the PAC message;
c) coordinate with the affected controller immediately; and
d) if a corresponding FDR cannot be identified:

Typical PAC error message	FDC action
Multiple FDRs exist	Determine the correct FDR and advise the affected controller when referring the PAC message.
Matching FDR not found	1) Request FDR from originator (RQP); 2) Advise the affected controller of the situation when referring the PAC message; and 3) When the FDR is received (or unable to obtain details), advise the affected controller.

14.8.4 Processing of CHG, DLA or CNL messages

14.8.4.1 CHG with Field 18 changes

On presentation of a CHG message which includes Field 18 information and 'WAR: CHG updated Field 18 of FDR' shown in the error field:

1) display the corresponding FDR;
2) ensure Field 18 of the FDR shows the intent of the change, being the:
   i) exact contents of the CHG message; or
   ii) contents of the CHG message plus or minus pre-existing Field 18 elements;
3) use CADAS and/or contact the originator to determine the correct details; and
4) when you cannot determine the correct details, make a value judgement to enter required details and enter the appropriate statement in the FMF.

14.8.4.2 CHG/DLA/CNL for PREA FDR

On presentation of a CHG, DLA or CNL message with 'WAR: CHG, DLA or CNL updated PREA FDR' shown in the error field where a Eurocat tower is located at the ADEP:

1) modify the FDR as required for any CHG message incorporating Field 18 changes (described in 14.8.4.1 CHG with Field 18 changes);
2) advise the ADEP tower of the type of message and any changed fields (e.g. 'CHANGE MESSAGE RECEIVED FOR ABC CODE 1234 - YBBN TO YMML WITH CHANGES TO THE RTE AND OTHER INFO FIELDS.'); and
3) include the SSR code in coordination with the ADEP tower where more than one FDR exists with similar details.

On presentation of a CHG, DLA or CNL message with 'WAR: CHG, DLA or CNL updated PREA FDR' shown in the error field where an INTAS tower is located at the ADEP:

1) modify the FDR as required for any Field 18 changes (described in 14.8.4.1 CHG with Field 18 changes);
2) if the FDR remains in the PREA state or is cancelled, take no further action; and
3) if the FDR is changed to NACT state:
   i) advise the tower that the FDR is about to be cancelled and resubmitted (e.g. '[CALLSIGN] WILL BE CANCELLED AND RESUBMITTED DUE DLA MESSAGE');
   ii) cancel the FDR from Eurocat (only); and
   iii) create a new identical FDR (in Eurocat only) but with the latest ETD.

14.8.5 Truncation and route amendment - Eurocat

14.8.5.1 Flight plan rejected

Amend the route details when a flight plan is rejected by the FDP due to undefined points or routes.

14.8.5.2 Within the FDSG

Add/delete points or routes without changing the original intent or integrity of the flight plan information.

14.8.5.2.1 Highlight alterations with an entry in FMF

Highlight the alteration with an FMF entry as follows:

a) FRC when amending a whole route;
b) FRC AFTER [known point] when amending after a point;
c) FRC BEFORE [known point] when amending before a point; or
d) FRC BTN [known point] [known point] when amending between points.

14.8.5.3 Outside the FDRG

Retain as much information as possible when altering a route outside the FDRG.

14.8.5.3.1 Outbound segments of flights

When altering the route outside the FDRG for outbound segments of flights:

a) terminate the route details at the farthest possible flight planned point outside the FDRG and enter 'T' after this point; or

b) if insufficient flight planned points exist outside the FDRG for truncation, insert the first point in the adjoining FIR (obtained from route data information) and enter 'T' after this point.

Make every effort to truncate the route at least one point beyond adjacent FIRs due to use of the following in adjoining FIRs:

a) Sector use of Mach number technique;

b) AIDC messaging; and

c) Use of RTE function.

Note 1: *The minimum acceptable truncation point is the first point inside the adjoining FIR.*

Note 2: *A flight planned point is a point shown in Field 15 of the AFTN FPL.*

14.8.5.3.2 Inbound segments of flights

When altering the route outside the FDRG for inbound segments of flights:

a) remove the minimum number of flight planned points, from as far as possible outside the FDRG, to allow for FDP acceptance of the route;

b) if insufficient flight planned points exist outside the FDRG, insert the point prior to the boundary (obtained from route data information); and

c) retain the original FIR entry conditions (i.e. speed, level, route).

Note: *A flight planned point is a point shown in Field 15 of the AFTN FPL.*

14.8.6 SID/STAR processing

14.8.6.1 Message rejection

Where SID or STAR information causes a message rejection or a WARning:

a) if within the YMMM or YBBB FDRGs, remove the SID or STAR without entering any explanatory statement in the FMF; or

b) if outside the YMMM or YBBB FDRGs, amend the route in accordance with 14.8.5 Truncation and route amendment - Eurocat.

14.8.7 Exit/re-entry flights - Eurocat

14.8.7.1 Re-entry portion of an existing flight

To create an FDR for a re-entry portion of an existing flight where an FDR for the outbound segment already exists:

1) create an AFIL plan for the inbound portion of the flight that maintains the intent and integrity of the original flight plan;
2) insert an EOBT corresponding to the ETA at the point prior to the flight's re-entry into the FDRG (this ETA is to include any DLE segments of the flight);
3) insert RE-ENTRY in the FMF; and
4) insert the REG of the aircraft from the original FPL.

14.8.7.2 FPL departing from within FDRG

When a FPL is received which departs from within the FDRG or overflies into the FDRG then exits the FDRG and tracks via a point or route which is not defined in the Eurocat database, and then re-enters the FDRG, a copy of the FPL is rejected to the ICAO reception queue.

14.8.7.3 Flight plan exit and re-entry

For a flight plan that exits and then re-enters a centre's FPSA, but does not re-enter the centre's FDRG, the FDP creates an FDR but does not recognise route data outside the FDRG. A copy of the FPL is directed to the ICAO reception error queue and is accompanied by a WARning message as follows:

a) 'WAR exist-re-entry FPSA rte is truncated' (all track details known); or
b) 'WAR rte element XXXX is unknown' (some track details not known).

Note: *An FDR has been created for some if not all of the flight.*

14.8.8 Multi FDRs and non-unique FPLs - Eurocat

14.8.8.1 Non-unique FPL rejection

The error message 'FDR ALREADY EXISTS' is displayed for a rejected FPL when the uniqueness criteria of a rejected FPL matches an existing FDR.

14.8.8.1.1 Processing the FPL

Rejected FPL	FDR state	Action
Identical to FDR	Finished	Advance the FIN FDR to the CNL state and submit the FPL in the error queue.
	All others	Delete the rejected FPL.
Different to FDR	Finished	Advance the FIN FDR to the CNL state and submit the FPL in the error queue.
	Inactive or PREActive	Contact the originator to determine the correct details. If no resolution obtained from originator: a) delete the FDR; b) submit the latest FPL; c) enter an explanatory statement in the FMF; and d) if PREA and affects a tower at the ADEP, advise the tower.
	All others	Pass the rejected message immediately to the affected controller for clarification with the pilot.

14.8.8.2 Message rejection for multi - FDRs

The error message 'MULTI FDRs EXIST' or 'CAN'T LINK MSG TO FDR' is displayed when:

a) multiple FDRs exist; or
b) the FDP cannot link the message to a specific FDR.

14.8.8.2.1 Processing these messages

Identify the corresponding flight stage using stored FDRs and:

Message	Action
DEP	Notify the first affected ATC position.
System DLA or CHG	a) Amend the FDR in accordance with the contents of the message; or b) Where not possible, relay the message to the first affected controller.

14.8.8.2.2 No modification

Do not modify the ACID of an inactive FDR to provide for FDP acceptance of a message relating to a similar PREActive FDR.

14.8.9 Track Definition Message (TDM)

14.8.9.1 Local instructions

Specify TDM procedures in LIs.

14.8.10 External Tower Systems (ETS) messages

14.8.10.1 ETS queue processing

Message type	INTAS originator	Requirements
EDS	All sites	Advise SS.
UTM	All sites	Advise CSEC.
CHG - IFR flight	All sites	Advise CSEC, except: a) not required if ETN is 10 min or less than that in the FDR; and b) not required if CHG only relates to ARW or DRW.
CHG - VFR flight	AD, BN, ML, PH	Advise CSEC, except: a) not required if ETN is 10 min or less than that in the FDR; and b) not required if CHG only relates to ARW or DRW.
	CG	Nil requirements if A015 and BLW. Advise CSEC if above A015, except: a) not required if ETN is 10 min or less than that in the FDR; and b) not required if CHG only relates to ARW or DRW.
	CS	Nil requirements if A010 and BLW. Advise CSEC if above A010, except: a) not required if ETN is 10 min or less than that in the FDR; and b) not required if CHG only relates to ARW or DRW.
	RK	Nil requirements if A045 and BLW. Advise CSEC if above A045, except: a) not required if ETN is 10 min or less than that in the FDR; and b) not required if CHG only relates to ARW or DRW.
	BRM	Nil requirements.
EST	All sites	Advise CSEC.

Message type	INTAS originator	Requirements
Combined LRM/ UTM	All sites	Advise CSEC only if: a) plan number exists in PLN; b) Identical Plan Number exists in MAN; and c) 'A1' is shown immediately after the Plan Number in MAN.
All others	All sites	Advise CSEC

14.8.11 RQP transmission

14.8.11.1 Restriction

Do not transmit RQP messages to military ADATS units.

14.8.12 FPL transmission

14.8.12.1 Manual transmission of FPL

Manually transmit FPLs as follows:

Destination	FPL source
Australian ATSC Military ADATS units	Transmit system FDR/FDE
Non-automated civil Non-automated military International agencies	Transmit original FPL (via CADAS)

Note 1: *Where the FPL is a locally-created FDR (i.e. LPL), it may be disseminated to all units via the TRS function.*

Note 2: *INTAS towers receive FPLs via direct feed from the parent ATSC.*

14.8.13 SSR code CHG messages

14.8.13.1 Third party communications

Ensure that international HF positions receive SSR code CHG messages for inbound and overflying international aircraft that require third party communications when the aircraft's original departure code will not be retained and used within the Australian ATM system.

Note: *SSR code assignment CHG messages are automatically generated by the responsible FDPs.*

14.8.14 Data Link EMERGENCY and ALERT messages

14.8.14.1 Data Link EMERGENCY and ALERT messages

Immediately advise the SS of Data Link EMERGENCY or ALERT messages displayed at FDC positions. These messages include:

a) ADS-C emergency initiated by #1$ at #2$;
b) ADS-C emergency cancelled by #1$ at #2$;
c) CPDLC emergency downlink received for #1$; and
d) CPDLC cancel emergency downlink received for #1$.

Note: *# and $ indicate fields that are filled when the message is displayed.*

14.8.14.2 Other ALERT messages

Apply the following procedures to other ALERT messages:

CPDLC alert	Required actions
Logon [acid]/[reg] at [position] rejected. Reason = [reason]	Attempt to locate an FDR to which the ACID in the logon refers: a) If successful, advise the CSEC of the FDR that the ACFT is attempting to logon as [incorrect ACID]; or b) If unsuccessful, advise SS immediately.
Logonrec. Two FDRs eligible: [ACID]/[REG] EOBT [EOBT1] accepted. EOBT [EOBT2] rejected	Advise the CSEC immediately.

14.8.15 ICAO FPL fields and associated update messages

14.8.15.1 Specific processing

Field	Error message	Description	Procedure
3	Message type cannot be determined	When a designator contains other than three letters, or the contents of Field 3 have been corrupted.	Identify the message type from the text contained within the message and correct the message type.
7a	ACID cannot be determined	When the ACID exceeds eight characters or is corrupted.	Phonetically rationalise the ACID to eight characters and enter ACID [*Actual ACID*] in the FMF. **Refer to the originator.** If unable to contact the originator, make a value judgement for typographical errors and attempt to determine the ACID from Field 18 information including REG, OPR or Flight Number. Enter CFM ACID in the FMF.
		When the ACID is missing.	**Refer to the originator.** If unable to contact the originator for an Australian registered domestic operation that: a) does **not** use flight number callsigns, use the REG in Field 7 and enter CFM ACID in the FMF; or b) uses flight number callsigns, insert NOACID and enter CFM ACID in the FMF. Apply b) above when unable to contact the originator for an international operator.
7b	SSR mode syntax error in Field 7	When the SSR mode contains a letter other than A, S or C.	Insert A. If Field 7c data is not provided, then no action is required.
7c	SSR mode syntax error in Field 7	When the message contains data other than four octal numbers.	For domestic received messages, **refer to the originator.** For international received ATS messages, delete Fields 7b/7c from the message and re-submit for processing.

Field	Error message	Description	Procedure
8a	Flight rule cannot be determined	When the message contains letters other than I, V, Y or Z or more than one letter has been entered.	**Refer to the originator.** If unable to contact the originator, make a value judgement based on Field 10 and 15 data and insert I, V, Y or Z. Enter CFM FRUL in the FMF.
	FRUL must be Y or Z for a change en route	When the message contains I or V with an en route indicator that has been entered in Field 15.	Enter Y if IFR to VFR, or Z if VFR to IFR, then enter CFM FRUL in the FMF.
	Y or Z must be used with en route indicator	When the message contains Y or Z without an en route indicator in Field 15.	**Refer to the originator.** If unable to contact the originator, make a value judgement based on Field 15 data and amend as appropriate. Where insufficient information is shown in Field 15, insert 'I' in Field 8a and enter CFM FRUL in the FMF.
8b	Type of flight cannot be determined	When the message contains letters other than S, N, G, M or X.	Make a value judgement based on ACID, Aircraft Type and Field 18 information.
9a	Aircraft type cannot be determined	When the message contains 1 or 2 numbers followed by a '/'.	Delete the '/'.
9b	Aircraft type not defined, or Aircraft type cannot be determined	When the message contains an aircraft type not defined in the Eurocat database or entered incorrectly.	Check the aircraft register and match it against the aircraft type in FDC documentation. If the aircraft type cannot be found, make a value judgement based on WTUR and performance data to select an aircraft type from the list of approved generic types (ULAC, BALL, SGL, SSGL, TWIN, TURB, JET, HEL, MILJ) then enter this selection in Field 9b and insert CFM TYPE in the FMF.
	Cannot determine ACFT type	For a single FPL that contains more than one ACFT type.	Enter the aircraft type of the least performance aircraft in Field 9b the REG of the aircraft of the least performance in REG/ in Field 18 and 'RMK/Multiple Type [*type 1*] + [*type 2*]' and 'REG [*registration 1*] + [*registration 2*]' in Field 18.
9c	Wake Turb Cat cannot be determined or TYPE and WAKE TURB not compatible	When the message contains missing/invalid WTC or a WTC that is not compatible with the aircraft type.	Cross-reference the Type and the Registration in the CASA aircraft register and: a) if a match is found, enter the applicable WTC; or b) if a match is not found (e.g. foreign registered), enter the applicable WTC for the shown type and enter CFM TYPE+WTC in the FMF.
	Wake Turb Cat is super heavy (A380)	When the wake turbulence category is listed as 'J'.	Amend to 'H'. Do not enter an FMF statement or send a CHG message.

Field	Error message	Description	Procedure
10a	NAV/COM Equipment cannot be determined	When a message contains no NAV/COM equipment.	**Refer to the originator.** If unable to contact the originator: 1) insert N; and 2) enter CFM NAVCOM in the FMF.
		When the initial letter is not N or S followed by any other NAVCOM indicators.	Amend to reflect the logical sequence of N or S followed by any other NAVCOM indicators.
	'/' missing or Field syntax error	When the message exceeds the number of permissible characters.	**Refer to the originator.** If unable to contact the originator: 1) rationalise the characters D, O and V to the single character 'S'; 2) if an excess still occurs, delete the following characters (including paired letters and numbers) in the order shown until an excess no longer occurs - Q, P, M, E, P1-P9, J1, J2, J3, K, Y, C, B, A; 3) enter the deleted characters in the Field 18 NAV/element at the beginning of the element e.g. NAV/Q P3; and 4) enter CFM NAV in the FMF.
10b	SSR equipment cannot be determined	When a message contains invalid Field 10b entries.	**Refer to the originator.** If unable to contact the originator: 1) delete the invalid entries; 2) enter the deleted characters in to the Field 18 SUR/ element at the beginning of the element e.g. SUR/M B4; and 3) enter CFM SUR in the FMF.
	No '-' before ADEP or error in previous field	When a message contains entries exceeding the number of permissible characters.	**Refer to the originator.** If unable to contact the originator: 1) delete the invalid entries; 2) delete the following characters in the order shown until an excess no longer occurs: - A, C, X, P, I, S, H, E, L; 3) enter the deleted characters in the Field 18 SUR/ element at the beginning of the element e.g. SUR/M B4 C P; and 4) enter CFM SUR in the FMF.

Field	Error message	Description	Procedure
13a	ADEP cannot be determined	When a message has no location, or a corrupt or unknown location.	**Refer to the originator.** If unable to contact the originator, make a value judgement for typographical errors based on Field 15/18 data and then enter CFM ADEP in the FMF.
	Cannot determine entry point to FDRG	When the departure point in a message cannot be determined.	If unable to determine entry point from Field 15 data, **refer to the originator.** If unable to contact the originator, create an AFIL FPL maintaining the integrity of the original FPL. Enter CFM ADEP in the FMF.
13b	Syntax error: cannot determine time. EOBT must not be earlier than present EOBT	When a message is corrupt or missing time, or on receipt of a DLA message with EOBT earlier than present EOBT.	**Refer to the originator.** If unable to contact the originator, enter the time four hours in advance of the present time. Enter CFM EOBT in the FMF.
15a	Cruising speed cannot be determined Not appropriate for type	When a message is corrupt or missing TAS, or on receipt of a message with a TAS that is not compatible with the aircraft type defined in the Eurocat aircraft performance database.	Make a value judgement for typographical errors, or insert a TAS derived from Field 15c or FDC documentation. Enter CFM TAS in the FMF.
15b	Level cannot be determined. Level is too high for type, e.g. F999	When a message is corrupt or missing RFL, or on receipt of a message with an RFL that is too high for the aircraft type defined in the Eurocat aircraft performance database.	**Refer to the originator.** If unable to contact the originator: a) make a value judgement for typographical errors; or b) insert F222 for jets or A011 for all other aircraft types. Enter CFM RFL in the FMF.

Field	Error message	Description	Procedure
15c		Refer to 14.8.5 Truncation and route amendment - Eurocat procedures for use within Field 15c	Any truncation or route amendment must be carried out, where possible, **without changing the original intent or integrity** of the flight plan information. If the route has to be altered within the FDRG, highlight the alteration with an entry in the FMF as follows: FRC, for amendment of a whole route; FRC AFTER [*known point*], for amendment after a point; FRC BEFORE [*known point*], for amendment before a point; FRC BTN [*known point*], [*known point*], for amendment between points. When altering the route outside the FDRG, for **Outbound** or **Inbound** segments of a flight, use the following procedures:
			Outbound Terminate the route details at the farthest possible flight planned point outside the FDRG and enter 'T' immediately following this. If insufficient flight planned points exist outside the FDRG for truncation, insert the first point in the adjoining FIRs (obtained from route data information) and enter 'T' immediately following it. The minimum acceptable truncation point must be at least the first point inside the adjoining FIR. Make every effort to truncate the route at least one point beyond adjacent FIRs due to sector use of Mach number technique, AIDC messaging and the RTE function.
			Inbound Remove a minimum of flight planned points from as far as possible outside the FDRG to allow for FDP acceptance of the route. Ensure the remaining route details include the originally intended FIR entry conditions (speed, level, route). If insufficient flight planned points exist outside the FDRG, insert the point prior to the boundary (obtained from route data information) while retaining the original FIR entry conditions (speed, level, route).

Field	Error message	Description	Procedure
15c	Route field exceeds 750 characters	When a message exceeds 750 characters.	Remove sufficient route details to enable FDP acceptance in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures with the following priority: 1) From outside the FDRG; and 2) From within the FDRG.
15c	Route contains too many airways	When an FPL/CHG message contains more than 11 route identifiers.	Remove sufficient route identifiers to enable FDP acceptance in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures with the following priority: 1) From outside the FDRG; and 2) From within the FDRG.
	Indicators cannot be used consecutively	When a message contains consecutive route indicators (IFR, VFR, DCT, T).	Retain one indicator with the following priority for retention: FRUL, T and DCT.
	Route cannot be determined	When a message has no route information.	**Refer to the originator.** If unable to contact the originator, insert DCT and enter FRC in the FMF.
15c	Route field must contain a known point Cannot determine FPL trajectory	When a message does not contain any recognised points in the route.	If ADEP/ADES is outside the FDRG and the flight: a) is not an exit/re-entry or overflight, delete the message; or b) affects the FIR, refer to the originator to determine the correct details. If unable to ascertain correct details: a) insert the navaid at ADEP or ADES which is located within the FDRG; or b) substitute unknown points with recognised points (e.g. Lat/Long or bearing distance (YWIO000001) using FDC resources and enter the appropriate FRC remark in the FMF field.
	Unable to calculate FDRG exit point	When the FDP cannot calculate the FDRG exit point.	Determine the Lat/Long or bearing distance from a known point before/after the boundary from relevant documentation and enter it into the route field, then enter the appropriate FRC statement in the FMF.

Field	Error message	Description	Procedure
15c	Cannot determine entry point to FDRG	When the FDP cannot calculate the FDRG entry point.	If the point before/after the boundary is not known enter an approximate Lat/Long entry point for the boundary by reference to a chart, then enter the appropriate FRC statement in the FMF. Determine the Lat/Long or bearing distance from a known point before/after the boundary from relevant documentation and enter it into the route field, then enter the appropriate FRC statement in the FMF.
	(route) does not start from ADEP/ADES	When the (route) does not start at the ADEP/ADES.	Within the FDRG: a) if the route number conforms with ADEP/ADES (refer to FDC documentation), insert the route entry point prior to the route number; b) if the route number does **NOT** conform with ADEP/ADES, **Refer to the originator; or** c) if unable to contact the originator, make a value judgement based on FDC documentation and then enter the appropriate FRC statement in the FMF. Outside the FDRG: Modify route details to enable FDP acceptance in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures.
15c	XXXX is entered twice in a row	When the message contains consecutive identical fixes.	Make a value judgement in reference to Field 18 airwork data and if required make the points uniquely different maintaining the integrity of the FPL.

Field	Error message	Description	Procedure
15c	Route element XXXX unknown	When a message has corrupt or invalid route data (excluding change of speed and/or level).	If a SID/STAR: a) within either Australian FDRG, remove the SID or STAR without entering any explanatory statement in the FMF; or b) outside either Australian FDRG, amend the route in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures. If not a SID/STAR: a) make a value judgement for typographical errors (crosscheck FDC documentation); b) refer to originator for resolution if not a typographical error; or c) if unable to resolve via originator, amend in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures.
	WAR Route is truncated	When the route is truncated.	If a WARNING Message is displayed, check the expanded route field of the FDR to ensure it reflects the original intent of the FPL. If the route has to be altered outside the FDRG, modify in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures.
15c	ETI XXXX to XXXX too long	When the FDP cannot calculate the FPL trajectory between two given points.	Determine a Lat/Long or a bearing and distance from a known point which approximates a mid point between the two given points. Enter the appropriate FRC statement in the FMF.
15c	$ not allow after $	When the route indicator appears before/after route identifier.	Within the FDRG, delete DCT and if necessary enter a defined point from Route Data for that location. Outside the FDRG, amend in accordance with 14.8.5 Truncation and route amendment - Eurocat procedures.

Field	Error message	Description	Procedure
	Cannot determine direction on $	When the FDP cannot determine the direction of flight.	Where the FDP cannot recognise entry or exit for an overflight or exit/re-entry error: a) if the track is a published route, enter the route entry/exit waypoints within the FDRG; or b) if the track is not a published route within the FDRG, enter a LAT/LONG or bearing and distance for an approximate Exit/Entry waypoint. Enter the appropriate FRC statement in the FMF.
	$ not appropriate for type	When the 15c speed is not appropriate to the aircraft type.	Make a value judgement for typographical errors, or enter the Field 15a TAS or a TAS derived from FDC documentation. Enter CFM TAS in the FMF.
15c	$ is too high for type e.g. F999	When the 15c level is too high for the aircraft type.	**Refer to the originator.** If unable to contact the originator: a) make a value judgement for typographical errors; or b) insert F222 for jets or A011 for all other aircraft types. Enter CFM RFL at [position] in the FMF.
16a	Unable to calculate FDRG exit point	When a message has a corrupt or unknown location.	a) Make a value judgement for typographical errors (crosscheck with FDC documentation); b) **Refer to originator** for resolution; or c) If unable to contact originator, enter ADES based on the last tracking point in Field 15 or Field 18 data and enter CFM ADES in the FMF.
16b	Cannot determine time	When the EET exceeds 24 hours.	Reduce the EET to 2359 and enter CFM EET in the FMF.
		When the EET is missing or corrupt.	**Refer to the originator.** If unable to contact the originator: 1) make a value judgement, maintaining the integrity of the FPL; 2) enter this EET and then process to create the FDR; and 3) using the route function ascertain the System EET and replace FDC value judgement EET with system calculated one.

Field	Error message	Description	Procedure
18	Other info field exceeds 250 characters	When the message exceeds 250 characters.	Delete superfluous information including Field 19 data that has been transmitted as part of Field 18 and then delete subfields in the following order: RIF/, TALT/, RALT/, RMK/, (delete superfluous entries but retain sufficient description for navaid training and military specific flying activity data), ALTN/, (delete ZZZZ Field 16c)
	A '0' or valid info is required	When a message has no data.	Insert REG/VH [*acid*] if it is an Australian registered domestic operation **not** using a flight number callsign.
	Aircraft registration is required, cannot determine REG	When an aircraft's registration is missing.	**Refer to originator**. If unable to contact the originator: a) make a value judgement based on CADAS or Internet data; or b) insert REG/ZZZZ. Enter CFM REG in the FMF.
18	Text required after indicator	When a message has incorrect syntax.	Correct the syntax error.
		When a message has no text following an indicator.	If the indicator is not REG/, delete the indicator. If the indicator is REG/, refer to the process above.
	ALTN/ refused. Alternate not ZZZZ	When a message contains ALTN/ without ZZZZ in Field 16c.	Insert ZZZZ in Field 16c.
	ALTN/ not found in other info field	When a message contains ZZZZ in Field 16c but does not contain ALTN/.	Delete ZZZZ from Field 16c.
	DEP/ refused. ADEP not ZZZZ	When a message contains DEP/ without ZZZZ in Field 13.	**Refer to originator.** If unable to contact the originator: a) make a value judgement to match Field 13 and 18 data to ensure the integrity of the FPL; b) delete DEP indicator; and c) enter CFM DEP PLND [*dep*] in the FMF.
	DEST/ refused. ADES not ZZZZ	When a message contains DEST/ without ZZZZ in Field 16.	**Refer to originator.** If unable to contact the originator: a) make a value judgement to match Field 16 and 18 data to ensure the integrity of the FPL; b) delete DEST indicator; and c) enter CFM DEST PLND [*dest*] in the FMF.

Field	Error message	Description	Procedure
18	Unknown indicator in other info field	When a message contains an unknown indicator.	**Refer to the originator.** If unable to contact the originator: 1) delete the indicator; and 2) insert the information within RMK/.
22a	No '-' before AMDT, or error in previous field	When a message contains an invalid field number.	Identify the correct field number from the message content and amend as appropriate.
22b	As per description	When a message contains invalid information and the corresponding error message is displayed.	Correct the field as per the error message.

14.9 CATIS/DATIS unserviceable

14.9.1 Contingency

14.9.1.1 ATIS relay

When the CATIS/DATIS is not available, relay ATIS details to the FDC for AFTN dissemination via fax (preferred) or voice.

14.9.1.2 ATIS readback

If the ATIS is relayed verbally, the FDC must read back the:

a) ATIS identifier;
b) runway(s); and
c) QNH (preceded by the word 'FORECAST' when sourced from the TAF).

14.9.1.3 ATIS composition

When composing ATIS messages:

a) use the standard data conventions from the table below;
b) use a maximum of 40 characters per line;
c) use approved abbreviations;
d) where information provided for ATIS transmission is not shown in the table below, incorporate it in the transmitted message in accordance with MATS and 3 Meteorology e.g. Holding delay, Dew point; and
e) when the actual QNH is not available, leave the QNH field blank and insert 'ACTUAL QNH NOT AVAILABLE AERODROME FORECAST QNH (value)' as the first item in the SIGWX field.

ATIS line title	Data conventions of ATIS content
ATIS	Begin the ATIS with the: 1) ICAO location indicator (e.g. YMML) followed by a space; 2) the code letter assigned to each separately prepared message followed by a space; and 3) six figure time of receipt (e.g. 012200).
APCH	Type of approach expectation (e.g. EXP ILS APCH, EXP VOR APCH).
RWY	Runway Number (e.g. 32, 01, 16 RIGHT).
SFC COND	Significant runway surface conditions (e.g. FLOODED, WET, WATER PATCHES, DAMP).
OPR INFO	Other essential operational information (e.g. LAHSO, RWY 14 CLSD DUE WIP).
WND	Either: a) show as received (e.g. CALM, VRB); b) show direction of wind, expressed as three characters followed by a forward slash, then the wind speed expressed as one, two or three figures (e.g. 090/6); or c) express a constantly changing wind direction or wind speed by separating the variables by a hyphen (e.g. wind varying between 060 and 120 degrees minimum 15 knots maximum 28 knots to be expressed as 060-120/15-28). Show other wind speeds ending with the abbreviation KT (knots) (e.g. a wind of 090 degrees 10 knots with a maximum crosswind of 13 knots would be expressed as 090/10 MAX CROSSWIND 13 KT).
VIS	Either: a) show as received (e.g. GREATER THAN 10 KM); or b) show a number, then as received in either kilometres or metres (e.g. eight kilometres is expressed as 8 KM and two thousand metres is expressed as 2000 M). Additional visibility may be expressed as: REDUCING TO (distance) IN (weather type) (e.g. 6 KM REDUCING TO 4000 M IN RA).
WX	Present weather – expressed as received using approved abbreviations. **Example 1:** Thunderstorm observed northeast to south, expressed as: TS OBS NE TO S **Example 2:** SHOWERS IN AREA **Example 3:** CAVOK.
CLD	Displayed as shown in MET products, e.g. SCT035.
T	Temperature as received.
QNH	As received.
SIG WX	**Example:** SEV TURB IS FCST BLW 8000 FT.

14.9.1.4 ATIS transmission

Use the table below to address contingency ATIS transmissions:

Location	AFTN addresses
YPAD	YBZZACAB + YBZZACAT
YMAV	YBZZAVCB + YBZZAVCT
YBBN	YBZZBCAB + YBZZBCAT
YSCB	YBZZCBAT
YBCG	YBZZGCAB + YBZZGCAT
YBCS	YBZZCCAB + YBZZCCAT
YMEN	YBZZECAB + YBZZECAT
YMML	YBZZMCAB + YBZZMCAT
YPPH	YBZZPCAB + YBZZPCAT
YSSY	YBZZSCAB + YBZZSCAT
YSTW	YBZZTCAB + YBZZTCAT
YBRM	YBZZBRAT
YBRK	YBZZRKAT

14.10 Interim systems procedures

14.10.1 Work arounds

14.10.1.1 Intent

When addressing particular systems behaviours:

a) issue procedures by TLI initially;
b) publish in this chapter as required; and
c) record ASID numbers with the relevant chapter entry.

14.10.1.2 CHG message not to include 'T' (ASID 28295)

Do not transmit CHG messages from Eurocat or CADAS to an Australian ATSC with route details containing the truncation indicator 'T'.

14.10.1.2.1 Route details in CHG message

If transmitting route details in a CHG message, show the complete route details.

14.10.1.2.2 If the Eurocat route includes the 'T' indicator

If the Eurocat route includes the 'T' indicator, access the complete route details for CHG message transmission from the originally filed details in CADAS.

14.10.1.3 Corrupted FDRs after flight plan restore

During a Eurocat upgrade and after the flight plan restore action, check all aircraft to ensure the system times in the FDR are valid.

Note: *If a corrupted FDR is coupled to a surveillance or ADS-C position symbol, the displayed ground speed will reflect the radar, ADS-B or ADS-C derived speed.*

14.10.1.3.1 Corrupted FDR identified

If a corrupted FDR is identified on the upgraded system, and prior to performing control functions from the upgraded position:

a) cancel it and resubmit the original FPL;
b) coordinate and depart the new FDR at the current time;
c) UPR the new FDR in stages of less than two hours to the aircraft's current position; and
d) instruct Data Link aircraft to log on.

14.10.1.4 Exit coordination status window accessibility

Do not right click on the exit coordination status field (where present) in the flight progress strip unless you are trained to use the ECSW.

14.10.1.5 Blank Mode C indication (ASID 43110 closed, but included for controller information)

Confirm the pilot's intentions if a high rate vertical change is not expected.

Note 1: *If an aircraft has a sustained rate of climb/decent above 7,300 fpm, the displayed mode C level will show the last received Mode C level before the high rate vertical change commenced for 20 seconds and then go 'blank'.*

Note 2: *A blank mode C field may indicate an emergency descent.*

14.10.1.6 Slowing of Eurocat operational nodes during INSTREF in ML ATSC (ASID 47416)

In ML ATSC, the SS must not permit INSTREF of Eurocat Software on the ENR platform to begin before 12:30 am local time(1330 UTC during daylight savings, 1430 outside daylight savings), or finish after 2:00 am local.

Do not INSTREF to ML TMA partition before 10:00 pm local time.

The SS may delay these start times if required.

14.10.1.7 Setting PETO on ADES using a time in the past (ASID 48171)

Do not set a PETO for the ADES that equals the current time or earlier.

Note: *The PETO will be treated as an ATO, will cancel the SARtimer and allow the FDR to finish.*

14.10.1.8 Flight Plan Window lock up for ACIDs containing 'TXT' (ASID 92896)

Attempts to open the FDR (via Eurocat Flight Plan Window) of an aircraft with ACID containing 'TXT' will result in the lock up of the Flight Plan Window and an accompanying 'YACC client not active' error message.

Once locked, no further interaction with the Flight Plan Window is possible. The Flight Plan Window may be closed and reopened, however the window will remain locked.

Recovery procedure as follows:

1) Close FPW;
2) Open FPW;
3) Click Escape;
4) Click Clear;
5) Click Escape again; and
6) Click Clear again.

Interaction with FDRs via the FPW should now be possible.

14.11 Eurocat upgrades (software and data)

14.11.1 Degraded mode

14.11.1.1 Procedures

Brisbane and Melbourne Centres, and Sydney and Perth TCU staff, should refer to the following sections of the Degraded Modes Handbook, as appropriate, for further guidance:

a) Entering degraded modes: Chapter 16 (TCU)/Chapter 19 (Centre) - Eurocat Upgrade;
b) Ongoing Operations: Chapter 9 (TCU)/Chapter 10 (Centre) - LAN Failure; and
c) Upgrading: Chapter 3 - Warm Start FDP Upgrade Procedures:
   i) Eurocat tower staff should refer to the 'FDP Failure' section for guidance; or
   ii) INTAS tower staff should refer to Eurocat FDP in the Degraded Modes Quick Reference Guide.

14.11.1.2 ADS-B separation and RAIM prediction

ADS-B separation depends on RAIM prediction, which is not automatically available once consoles are placed into 'bypass'. The Degraded Modes Handbook specifies alternate methods for RAIM prediction.

14.11.1.3 Flex tracks

Flex Tracks may still be generated, but will be subject to final review/ authorisation by the BN ORM and ML SM3.

14.11.1.4 International departures

Advise the FDC of the actual departure time for aircraft departing within the FIR to an international destination.

FDCs must transmit the appropriate aircraft movement message.

14.11.1.5 Avcharges

Keep a manual record of all arriving aircraft, and all international departing and overflying aircraft, for Avcharges purposes. This includes aircraft arriving at OCTA aerodromes. Collect this information from the **FPL Save time** until advised by the SS.

14.11.1.6 GRIB wind download

If an upgrade will extend beyond 1445 UTC, the upgrade SS should request the manual GRIB 00z series download from MIS before 1445 UTC, so the download is complete before the automatic 12z series download at 1500 UTC. The upgrade SS must check to ensure that the manual download is complete by 1500 UTC. If the manual download completes between 1500 and 1505 UTC, it will be 'aged out' and deleted. If this occurs, the upgrade SS must request a further manual download from MIS.

14.11.1.7 RMAP and DAIW areas

The SM must note and advise the BN SS of RMAP details that require re-entry into the system after the upgrade is complete if they are unable to do it themselves.

ML SS will enter the RMAP, DAIW and AGDP DAIW details as per normal procedures.

14.11.1.8 Awareness

Be aware that when there are aeronautical data changes (e.g. SID, STAR or air route changes) on an AIRAC date, aircraft flight systems may not be programmed with the new data and flight crew may not have new plates or charts until the first flight, commencing from the operator's home base, after the change date.

Exercise caution in regard to any changed aeronautical data, especially with foreign registered aircraft, for the first day after an AIRAC date.

14.12 Cordless headsets

14.12.1 Management of cordless headsets

14.12.1.1 Battery changes

Change the battery of the cordless headset after a maximum of three hours use in order to avoid discharging the battery. Consider changing the battery every handover/takeover.

14.12.1.2 Battery replacement and labelling

Discard and replace the cordless headset batteries every two years. Label the batteries with the due date for replacement.

14.12.1.3 Headsets not in use

Switch off cordless headsets whilst not in use.

Note: *The effective range of cordless headsets may be affected by the number of units switched on in the vicinity.*

14.12.1.4 Failure mode

A cordless headset that has failed or is operated with a depleted battery can result in an open microphone.

14.12.2 Location specific restrictions

14.12.2.1 Restrictions at Adelaide, Broome, Canberra, Essendon, Melbourne, Perth, Rockhampton and Sydney towers

Do not use cordless headsets when operating in the following roles:

a) ADC; or
b) SMC.

This extends to familiarisation, training and assessment activities and merged/ combined role configurations. A corded headset must be used at all times.

Note: *Sydney TWR ADCC is permitted to use cordless headsets, as the role does not operate a safety critical air/ground frequency.*

14.13 Voice Communication

14.13.1 Voice Communication System

14.13.1.1 Unmonitored frequency rectification

If a frequency reverts to the DEFAULT workstation:

ATSO at DEFAULT workstation	ATSO at workstation with incorrect mission activated
Advise OCA and/or ATSO with incorrect mission activated	
	Load and activate correct mission
	Verify that all required frequencies are in traffic mode
	Advise ATSO at DEFAULT workstation that the correct mission is activated
Load and re-activate current mission to remove frequencies in monitor mode	Consider making a broadcast for aircraft to repeat any transmission that was not acknowledged

Note 1: *If incorrect mission activation results in an unmonitored frequency, that frequency will revert to the unit DEFAULT workstation in monitor mode after five seconds, along with an audio chime.*

Note 2: *Refer to 2.6.2.3 DEFAULT workstation unavailable if the DEFAULT workstation is temporarily unavailable.*

14.13.1.1.1 Unmonitored frequency at the DEFAULT workstation

If the incorrect mission was activated at the DEFAULT workstation, load and reactivate the correct mission.

Note: *If a frequency becomes unmonitored due to incorrect mission activation at the DEFAULT workstation, that frequency will re-appear at the DEFAULT workstation after five seconds, along with an audio chime.*

14.13.1.2 CALL FORWARD function

SM may CALL FORWARD SM missions to the SS/ORM.

14.13.1.2.1 Other regular use

Detail other regular use of the CALL FORWARD function in Local Instructions.

14.13.1.2.2 One off use

Obtain Supervisor approval for one off use of the CALL FORWARD function.

14.13.1.3 VIRR access to other workstations

If requested, VIRR access to other positions is limited to Planner (Airservices only) and Supervisors.

14.13.1.4 Non-operational personnel

When monitoring a workstation, non-operational personnel must monitor from the CO jack. Brief non-operational personnel to avoid activating the PTT before they monitor a workstation.

Note: *A headset plugged into a CO jack will override A-G communications if the PTT is activated.*

14.13.1.5 Handover/Takeover

Use the MIC REC function to record handover/takeovers on a single workstation.

Note: *Refer to 2.6.2.1 Concentrating/deconcentrating workstations for concentrating/deconcentrating workstations.*

14.13.1.5.1 Use of appropriate jacks

If using headsets during a handover, the handing over ATSO must operate from the OP jack and the accepting ATSO must monitor from the CO jack.

Note 1: *This will ensure the handover is recorded and communication is via the headset.*

Note 2: *An ATSO using the MON function from another workstation cannot hear communication between OP and CO when MIC REC is selected.*

14.13.1.6 Sidetone

Do not disable sidetone.

Note: *With sidetone disabled an ATSO plugged into CO cannot hear OP transmitted audio.*

14.13.1.7 Disable Foot PTT function key (PH, ML and SY only)

Do not select the 'DSBL FOOT PTT' function key.

Note 1: *The 'DSBL FOOT PTT' function key disables the hand PTT (ferret) as well as the foot PTT.*

Note 2: *Not applicable in BN.*

14.13.1.8 Cold line hang up tone

Both parties to a cold line call must terminate the call via the direct access key, call queue or 'END' key.

Note 1: *When a cold line is terminated by either party the remaining party will receive a hang up tone (similar to a normal telephone call) until they also terminate the call.*

Note 2: *If a cold line call is initiated but not established, it may not be terminated via the call queue, only via the direct access or 'END' key.*

A

B

C

D

E

F

G

H

I

J

L

O

P

Q

R

S

U

V

W

X

This page is intentionally blank